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ABSTRACT

The report is a third party audit/evaluation of a research and development project to provide curriculum and staff development for the implementation of a high school career development program in two career clusters at the Washington, D.C., Lemuel A. Penn Career Development Center. A project overview is presented; major responsibilities of the evaluation team are outlined; and the findings, conclusions, and recommendations detailed. The late date of contract approval for the evaluation meant that the evaluation team was not involved in the project until it was almost completed, and personal visitation at the staff training workshops was limited. Principal data collection instruments were a participant questionnaire developed from the training objectives, interviews with project staff, and review of all available documents and materials relating to the project and training workshops. Results of the questionnaire survey are detailed in both narrative and tabular form. Based upon analysis of evaluation findings, main conclusions were that the major objectives of the RCA consulting team in workshop training were met, but that the overall program plan and stated objectives were too extensive to be accomplished in the time period allowed. More planning and project development should be implemented. (RG)

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FINAL RERORT ON RROGRAM AUDIT : EVALUATION OF CURRICULUM AND STAFF DEVELOPMENT TRAINING FOR TWO CLUSTERS

PROJECT No. V361059L

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FINAL RERORT ON RROGRAM AUDIT : EVALUATION OF CURRICULUM AND STAFF DEVELOPMENT TRAINING FOR TWO CLUSTERS

PROJECT No. V361059L

PART C - Research and Development

Career Education

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SECTION I -- OVERVIEW

This research and development project was funded under the Office of Education grant number OEG-0-73-1234 to provide the D. C. Public Schools with planning and evaluating capabilities for the implementation of a high school career development program in the Lemuel A. Penn Career Development Center. Specifically, this project was designed to provide the "curriculum and staff development for two career clusters: communications and media -- fine arts and humanities." The intent is to establish two interrelated pilot career clusters of career development programs designed to provide job preparation in communications and media; fine arts and humanities. Students enrolled in the academic and vocational high schools who wish to pursue studies in communications and media; fine arts and humanities clusters will be released from the high schools to study part-time in the Lemuel A. Penn Center. The site of the project will be the former National Geographic building, a facility that was acquired by the D. C. Public Schools for expansion of career development programs at the secondary level and which has now been officially designated as the Lemuel A. Penn Center. The designated center is at Third and R Streets, N.E., which is centrally located within the school district and offers ready accessibility to the students in the twelve academic and five vocational high schools located throughout the District of Columbia.

The two week workshop for Curriculum and Staff Development conducted August 20-31, 1973 was originally scheduled as a six week workshop and was to have started July 9, and continued through August 17, 1973. Inability to obtain contractual assistance in the training of project staff and

teachers was the first in a number of situations which eventually made the project stretch out through May 30, 1974. In this phase of the project, a nucleus of four staff persons and approximately fifteen teachers, including the principal to be assigned to the Career Center were to engage in an intensive period of training and curriculum planning.

As initially approved and presented to the U.S. Office of Education, the following project activities were to be carried out:

1. Job survey and training requirements.

a. Review manpower studies and surveys of the fine arts agencies and institutions and the graphic arts industries to determine the kinds of jobs and job opportunities available to young people.

b. Determine the type and quality of training that is required for entry level jobs in industry.

c. Review curriculum and other materials that are available within the present school system for use in these programs.

d. Develop an overall structure through which each program element can interact while sharing the resources and facilities.

2. Develop curriculum outlines for each instructional component within the two career clusters.

3. Prepare individual learning packages or units within the program components.

4. Develop a meaningful program of production activities to enhance the instructional programs. The students were to receive a maximum of practical experience in producing materials for distribution in the schools and community.

5. Devise a plan for evaluating the program:

a. Collect and review various types of evaluation criteria and instruments designed to evaluate student performance. Determine possible use in these programs.

b. Devise other special tests and evaluation devices necessary to determine student performance and progress.

c. Devise a plan for the periodic conduct of outside (third party) evaluations. Develop a listing of agencies and/or institutions capable of such evaluations, particularly with the emphasis of determining the success of program graduate placement based upon training qualification of job performance and employment advancement.

6. Suggest a means for continuous planning after implementation of the clusters.

7. Develop program promotion and public relations.

8. Suggest workable schedules for high schools in order that students may have the opportunity to attend the Center.

9. Explore the possibilities of students receiving maximum credit for study in the Center. Review unit requirements for electives with respect to overall requirements for graduation.

10. Plan a system for transporting students between the Center and the high schools.

11. Develop a plan for a store through which students can sell their products as created in the studios, laboratories and workshops. (This activity to be correlated with the Distributive Education Programs).

12. Develop a schedule and timetable for accomplishing certain goals and objectives.

13. Plan and organize a counseling service for the Center. (This service is to be correlated with the overall Career Development Counseling Program).

14. Review staff requirements and determine qualifications of personnel. Suggest procedures for recruiting staff. Review qualifications of existing staff and determine staff development needs.

15. Develop a master plan for curriculum and staff development to be implemented in cooperation with the Bachelor of Science Degree in the teaching of technology program at Washington Technical Institute.

16. Identify consultants to serve as advisors and evaluators of the project. Make initial contacts to determine their availability for service and devise a schedule of activities to utilize those services.

17. Selection of students and student participation.

a. Proposed program development is to serve approximately 600 students during the first year of operation, September, 1973 through August, 1974.

b. Students interested in pursuing the activities offered through the center programs will be encouraged to enroll. Students will be registered in the 12 academic high schools, the five vocational high schools, the Workshops for the Careers in the Arts, the Literary Arts Program, and the Urban Communications Workshop.

Process Objectives enumerated as planned or in-being as of February 26, 1973 were:

1. A planning committee had been organized to work out the basic framework for the overall planning activities.

a. Make up of the committee consisted of students, teachers, supervisors, and community representatives.

b. The focus of effort was on 1) methods and techniques for developing maximum articulation and cooperation between program elements, and, 2) on proper utilization of space and other resources.

2. An advisory committee on the pilot clusters: communication and media--fine arts and humanities, was being established.

a. Make up of the committee would include representatives from the Board of Trade, Civil Service Commission, local business and industry, cultural institutions and agencies and private and public schools.

b. The committee would be responsible to 1) recommend overall program needs (through an on-going evaluative process), and 2) assist in developing cooperative training and placement opportunities.

3. The Project Director (P/D) would carry out the immediate responsibilities for the overall planning effort.

a. The P/D would work closely with all departments having direct involvement with the project.

b. The P/D would be directly responsible to the Assistant Superintendent, Department of Career Development Programs.

c. The P/D would be responsible for coordinating the program with related activities in the high schools.

4. Center guidance and counseling services would be correlated with the on-going guidance and counseling services of the Department of Career Development Program and the public schools.

a. Guidance service would be provided to assist students in satisfying psychological, social and career needs.

b. Guidance services would be so designed to aid students who seek employment immediately upon completion of high school as well as those who plan to continue their education.

c. Students would receive systematic assistance in career planning, placement and follow-up service in the development of goals and choices related to their educational and career futures. Services would include: 1) provision of information about career opportunities, 2) helping students determine if opportunities suit them, and 3) helping students take proper steps to achieve desired goals.

d. Guidance service would have a primary focus upon: 1) creating understanding of many problems that confront students in their immediate (short-range) and long-range planning, 2) working out a means of coping with or determining the solutions to their problems; and 3) emphasizing career planning, by giving the student assistance in thinking through the short-range, as well as, the long-range goals.

5. Design of all project components would be in such a manner as to emphasize a careful measurement of student outcomes in relation to the treatments attempted and to provide for appropriate program revisions where indicated: 1) to internally develop assessment techniques in each component, and, 2) install procedures for recycling and revision of the various treatments tried until the desired student outcomes are attained.

6. To maintain accurate documentation with regard to the exact methods and procedures which are used, to include the associated costs, so as to yield data essential to judging the potential transportability of successful components.

7. The initial research and development funds under Part C would provide the District necessary support to assure the careful planning and coordination of this overall effort. The duration of this project would be six weeks, beginning July 9, 1973 and continuing through August 17, 1973.

The plans then, as indicated, were to use the grant for staff and curriculum development for the Lemuel Penn Center programs. The Acting Project Director continued to pursue the initial funding for this project through an extended period of personal conferences and letters to follow up the original letter of assurance from the District of Columbia in accordance with the Section 134 of Part C of Public Law 90-576. After several delays and budget revisions, to include cost sharing with state and/or local funds for the project, the District of Columbia Proposal No. V361059L was approved and the grant awarded by the U. S. Office of Education as Grant Number DEG-73-2992.

With this approval action and grant, the Project Director could then proceed with the coordination of the initial approved proposal activities and the selection and contact of consultants to accomplish the contract services in the development of the pilot career education cluster program in the area of fine arts and humanities-communications and media. Contact was made with Dr. T. E. Smith, manager of curriculum, RCA Southwest Regional Office, Dallas, Texas. After initial planning sessions regarding personnel and required services, the decision was made to conduct the required workshops in two phases. This decision to modify the initially planned six weeks workshop was the result of the extension of grant approval, delay in obtaining contract services from RCA, delay in the review and selection process of teachers and the availability of teachers who would receive the staff development training. Phase one of the staff development and curriculum project was conducted by the RCA Service Company staff during the two week period of August 20-31, 1973. The efforts of the RCA Education Services group, the four D.C. Public Schools staff members and the 15-20 participating

teacher/trainees are reported in a Final RCA Staff Development Consulting Report dated December 26, 1973. In addition to the two weeks in August, the program was extended for two days, October 11-12, 1973. In this Phase I of the program, the RCA team was to provide "assistance in the development of a pilot career education cluster program" and "in preliminary steps necessary to the development of a comprehensive program---concentrated on the major objectives listed below:

1. To determine the kinds of job opportunities that are available to young people in the fine arts and graphic arts occupations by reviewing manpower studies and surveys of fine arts agencies and institutions and graphic arts industries.

2. To determine the kind and quality of training that is required for entry-level jobs in the industry.

3. To review curriculum and other materials that are available within the school system for use in the communications and media cluster and in the Fine Arts and Humanities cluster.

4. To develop an overall structure through which each program element can interact while sharing resources and facilities.

5. To develop curriculum outlines for each instructional component within the career clusters of communications and media and Fine Arts and Humanities."

Because of the great diversities in the teacher/trainees "perceptions of exactly why they were attending the conference and precisely how they would fit into the total scheme of the new career center," the initial conference approach to "train the selected group of teachers to design, prepare, and write instructional materials to be utilized in the career center,"

had to be abandoned after the first day and an alternate approach utilized. The Phase I workshop was then so conducted to "provide a conference environment in which the two groups (media and communications -- fine arts and humanities) could ask questions and make recommendations concerning the center, the programs to be offered, and how they would interrelate." As stated by the RCA consultants, " an openness concept had to be established where relevant questions could be asked regarding facts and proposed instructional make-up of the center, i.e. unravelling sessions after which we were able to proceed with the above (five) stated objectives."

Orientation for the staff development conference included:

1. Goals of the conference
2. Role of the RCA Consulting team
3. Role of the members from the Division of Career Development Programs.

Understanding the concept of career education and how to "convert" in relation to the career centers role in the total process was considered essential by the consulting team in order to establish a working frame-work. A simplified 10 step model was used as basic reference for discussion, with focus on steps leading to: a) the study of the current educational system to determine charges needed to convert to career education, b) conduct an inventory and investigate community resources, and c) design the preliminary program of career education. There followed an exercise in the review of the programs which had been suggested for development and implementation in the career centers. The survey of documents and sources of information to identify and assess the need for a particular program was begun. These listings of sources of information would be later utilized to validate the programs to be developed. Additional validation was to be accomplished by the participants, outside the conference period, in order to

determine the type and quality of education required for entry-level jobs (from an extensive listing of sources which was agreed upon for the D.C. locale).

The bulk of the remaining period of the conference was involved in the third major activity -- a review of the renovation plan for the National Geographic Building. To again quote the RCA report, "the first visit of the conference participants to the old National Geographic Building was close to a disaster. There was the first emotional, chaotic reaction to seeing the buildings run-down condition, and the fact that refurbishing work had not begun. Then there was the rage and rebellion over assignments of space; namely, the instructors felt that ill-conceived plans had been made for them, yet when the instructors were previously asked to make suggestions regarding the building, no one had come forward with the ideas when they were needed and being solicited." This session culminated in the teacher/trainees (instructors) realizing that they had better cooperate as a team in order to effect the change of plans which they desired. They worked hard to "swap" space, compromise and present their recommendations to the architect prior to the final bidding on the renovation contract. The detailed recommendations made during the conference are shown at Appendix C of the RCA Summer Workshop Report and involved the two clusters of the program planning.

Out of these recommendations and the understanding and agreements of the previous conference considerations came the formulation of a tenative philosophy statement for the Career Development Center. Goals were written for the Center and program outlines for each cluster were finalized. The complete statement of the RCA recommended Career Development Center Philosophy, Goals of the Career Development center, and the Programs for each pilot career

cluster were adopted and approved by the Project Director and Staff as published in Appendix D, RCA Summer Workshop Final Report. The recommended programs (clusters) outlined the content proposed for each program. It was recommended that the next logical step within each program would be the task analysis of each program area in order to state the content in terms of desired student competences. Then, stating of the program content in terms of behavioral or performance objectives.

Throughout this period, August-December 1973, the contract with RCA Service Company continued to be changed and/or modified to reflect current changes of actual staff decisions and activities, dates, times and those developments. Phase II Staff Development Conferences, as example, were rescheduled form November 5-9, 1973 and December 3-7, 1973 to February 25-March 1, 1974 and March 25-29, 1974. The Contract Article I, Statement of Work was changed or modified on three separate occasions -- only one of which was formally negotiated as a contractual change, due to "the extended delays in-system of contracting changes being formally effected." The modification to cover the conduct of Phase II conferences added the following to the Statement of Work:

a. Direct and establish techniques for deriving competency standards from program areas utilizing task analysis.

b. Review relevant curricula and related research materials collected by school personnel since the Phase I staff and curriculum development conference (8/20-31/73).

c. Assist in establishing advisory committees and identifying community resources as support for the two clusters.

d. Direct and establish guidelines for developing performance objectives.

e. Develop a recommended format for learning modules for both clusters; and

f. Direct writing of at least one learning module per program area suitable for instructional purposes.

RCA contract mandays were increased from 14 to 30 mandays over the two one-week periods. Contract Article II, Reports, added a final report to include at a minimum the following:

a. A listing of the advisory committees for each program.

b. The guidelines for developing performance objectives.

c. The recommended format for learning modules.

d. At least two examples of completed modules developed during Phase II of the conference.

e. A staff and management personnel self-assessment.

On February 19, 1974, five days prior to the first of the two one-week curriculum and staff development workshops (Phase II), the Project Director advised the contractor, Dr. T. E. Smith, Southwest Regional Office, RCA Service Company of further Article I-Statement of Work modifications. In the P/D letter reference:

1. Item b. That review of relevant curricula and related research materials collected by school personnel etc. be incorporated as an on-going activity during the workshop period.

2. Item d. Schedule session to include instruction and practice exercise in developing and writing performance objectives.

3. Item e. Provide examples of learning modules that utilize the format to be recommended.

On the 26th of February, 1974 the contract to perform the third party audit evaluation of the project was accepted, fully signed and forwarded to Alfred J. Morin and Associates. Date and time as well as many activities over the past seven or eight months had already overrun or had been out distanced and changed by domino theory effect. The evaluator was able to personally attend and monitor only one day's activity of the first one-week conference in Phase II due to this late date of contractual approval and notification. This then limited the audit evaluation process to a very minimal personal observation and mandated an after-the-fact evaluation dependant almost entirely upon interviews and reviews of available reports and memoranda of the project.

SECTION II

A. Major Audit/Evaluation Responsibilities

The specific audit/evaluation activities performed by the investigator project director focused on the staff training and curriculum development for the project. As stated in the Overview, the late date of approval of the audit/evaluation contract presented only six days of workshop for observation and collection of teacher/trainees opinions of the training offered. Essentially the training was composed of the Phase I summer workshop experience (August 20-31, 1973) and the Phase II, two one-week workshops (February 25-March 1, 1974 and March 25-29, 1974). One of the first activities of the audit/evaluation was the attempt to identify the training objectives for the teacher/trainees. The objectives were originally stated in the D.C. Public School letter of Assurance to the U. S. Office of Education, and in the agreements between the Acting Project Director and the RCA Service Company representatives. They were later formulated into a formal RCA contract signed September 4, 1973. These objectives were modified and changed during the conduct of the first workshop, referred to generally as the summer workshop even prior to the formal contract approval. In most cases, the objectives, or the actual components were being developed and thus modified before or during the training, as dictated by the realities of the training situations. The modifications were documented, though not formally, as contract revisions and became the guidance for the next training workshop to follow. As objectives were modified they were included in the final listings used by the auditor/evaluator.

1. Data Collection Procedures -- The principle collection devices used for the audit/evaluation task were the questionnaire, developed

from the training objectives, and the conduct of personal interviews with staff and teachers/trainees. The questionnaire and structured interview opinionnaires were designed to cover the understanding and attainment of the major objectives of the training.

The audit/evaluation encountered some problems due to the difficulty of determining the statements of objectives and of interpreting their change over the period of the audit/evaluation. In some instances, it was almost impossible to fully understand or interpret the actual intended outcomes of the objectives being used or considered at that particular stage of project development. Correct understanding is crucial to any evaluation effort, particularly by an outside evaluator. Poorly stated objectives may not accurately portray the intended outcome. This in turn, could result in correspondingly inaccurate evaluation of the same objective. The evaluator attempted to deal with this problem as diligently as possible. Defective objectives should be rewritten prior to the development of evaluation instrumentation so the evaluator utilized specific component objectives as originally stated and verified by, or as modified and presented by the individual workshops.

Interviews were conducted with the Lemuel A. Penn Center Principal/Director, the Acting Project Director and Staff Coordinators for Staff Development and Curriculum Development. Involved RCA consultants were interviewed and observed in their advisory and training roles during two of the three workshop periods.

The questionnaire development process involved the identification of objectives and the development of specific items to assess the objectives. From the total bank of items developed, only those items which most

adequately assessed a particular objective were incorporated into the questionnaires. The items, in draft form, were submitted to the Principal/Director for review and approval prior to administration in final form.

The questionnaire was mailed to the identified workshop participants (teacher/trainees). This group of approximately 17 persons will represent the "experimental group", or those who have received the training in the workshops. In order to assess the impact of the curriculum and staff development workshops, a control sample was also identified. The procedure for the control group sample was the identification of a random sample of non-participating teachers from the total population of school districts with similar teaching positions. the Principal/Director and his staff participated in the selection of the control group and the sample selected for evaluation was equal in size to the sample of workshop participants. The numbers in each evaluation sample for each data collection are displayed in part four of this section and sub-section.

Data collection was conducted throughout the period by the review, pull-copy and file procedure. Where documentation was limited or non-existant, return visits and personal interviews were utilized to obtain the pertinent information.

2. Data Analysis Procedures -- All documents and materials pertinent to the workshops were collected, reviewed and included in the evaluation documentation file. Major objectives, goals and change modifications were called out for evaluation and final assessment to be included in the evaluative conclusions. The Summer Workshop analysis of data was necessarily limited to

the RCA Final Report on the Summer Workshop because the contractor provided no other materials or aids as used in the training (other than that he commented upon and/or attached as appendix to the RCA report).

Training materials were provided for the two one-week workshops held in early 1974 (Phase II) and review and analysis as to their content and pertinence to the stated training objectives was accomplished. This audit/evaluation was based upon review and the observed use of materials in the training situation. It was compiled with our judgemental evaluation and the stated opinions and evaluation of the teacher/trainees involved. In addition, the Acting Project Director, Principal/Director, Staff Coordinator of Staff Development and the Curriculum Development coordinator were all requested to provide internal evaluative memoranda in order to increase the breadth of the data collection and the analytical procedure of the investigation.

Procedure for the analysis of opinionnaires follows the structured questions base with quantified responses placed on a multiple response format (which also includes a narrative summary). Analysis involves the interpretation of recorded responses, allocation of quantification or indicated level of import within response, and the completion of a summary evaluation and written summary statement. The data from the questionnaires was collated and analyzed when the questionnaires were returned. The analysis procedure was as follows:

a. tabulation of the number and percentage of questionnaires returned.

b. tabulation of the number of responses for each alternate response for each item, and the number of non-responses for each item.

c. tabulation of the percentage for tasks b.

d. tabulation of the number and percentage of responses to each alternative for each item across components within the program where the items, and therefore the objectives on which the items are based, are common to the two or more components within the program.

e. tabulation of the number and percentage of responses to each alternative for each item across experimental group component and control group component when the items, and therefore the objectives on which the items are based, are common to the two groups.

f. presentation of information

1) tabular format

2) graphic format (where appropriate)

3) narrative summary format

is used to provide for explication and interpretation of the data and of the data collection and analysis procedures.

Procedures for the analysis of the questionnaires, both experimental group and control group, consists of tabulation of the responses identified by the sample group and analysis of any additional components. This analysis was limited to a summary of the major points presented and a statement of their positive or negative tone. A chi-square analysis was not attempted nor was a correlation coefficient developed relative to the interpretation of information between the two responding groups due to their small size and lack of realistic numerical frequencies.

3. Data Interpretation Procedure -- Records, memoranda and reports were reviewed and interpretation based upon verified statements of Project Administrative Staff or the RCA Consultant Staff. Judgmental and opinion

statement was collected relative to the degree of accomplishment of process objectives from individuals being trained as well as the project staff providing assistance in the training program. In the interpretation of the questionnaire instrument we identified the responses to the initial structured interviews for those persons who also completed the questionnaire instrument. This information assisted in the interpretation of the questionnaire data for the experimental group, since the opinionnaire responses of those persons who did not complete the opinionnaire but did complete the questionnaire may be different. The similarity or difference of responses could not be determined or interpreted without the use of a procedure such as the interview and opinionnaire. There was insufficient time and money to provide the follow-up interview to identify a reason or reasons why the non-respondents failed to complete the questionnaire. It was recognized that such a follow-up interview would have been of considerable value to the overall interpretation of the evaluation process.

The examination made of the project records was for the purpose of determining the degree to which the process objectives were being met as stated by the staff in official records. It was also felt necessary to identify and clarify the exact change requirements and modifications of objectives which were encountered over this initial period of the project.

The results of the data collection process and correlation of responses to questionnaire alternatives have identified the skills, knowledges, and attitudes of the persons randomly selected for the control group component and who might have been selected for the curriculum and Staff Development training. The assumption was made that these teachers did not appreciably

differ from the teachers who were selected for training and teaching in the center. This random selected group thus became the experimental group component. An interpretive comparison of skills, knowledges and attitudes of these teachers with the skill, knowledges, and attitudes of teachers who received the training provides an indication of the changes which have occurred as a result of participation in the training program.

While all other factors have not been held constant, an assumption was made that some of the differences between the control group component (non-selected teachers) and the experimental group component (teachers selected for training) is the result of the curriculum and staff development training. This interpretive task was designed to utilize data reporting procedures to identify differences between the two groups of teachers.

4. Data Presentation

a. A structured interview format was constucted to follow-up on process objectives. Component A teacher/trainees were interviewed and responses summarized by the auditor/evaluator. The structured interview instrument was designed to query and directly review the status of progress toward accomplishment of the identified objectives for each training, management and staff development component of the project. The opinionnaire was accomplished during the three-day period of the workshop March 26-28, 1974. Presented here is the data instrument (format) used in the Analysis of the Opinionnaire.

TABLE 1 - OPINION SURVEY: Personal Interviews of Teacher/Trainees on page 23.

TABLE 2 - OPINION TABULATION on pages 24-25.

Analysis of Summary Remarks found on Table 9, page 59.

b. The auditor/evaluator developed a questionnaire format consisting of items dealing with or identifying both process and product objectives of the project. The questionnaire consisted of items or questions with a series of alternative responses identified. Respondents were chosen from two mail-out listings: Component A -- the program teacher/trainees and Component B -- the randomly selected group of Vocational Education and Industrial Arts teachers from other schools in the system. The instruments are displayed at App. #1 and App. #2 in Section IV of this report. Respondents were asked to identify one of the alternatives supplied and space was provided for the inclusion of additional comments by the respondents. The analysis of additional comments was limited to their presentation in summary form and a statement or indication of their positive or negative tone. After tabulating the correlating responses, an analysis was conducted on each component.

TABLE 3 - Data Analysis-Questionnaire
Program Respondent-Component A , on page 26

TABLE 4 - Questionnaire: Respondent A
Tabulation on pages 27-31

TABLE 5 - Data Analysis-Questionnaire
Control Respondent-Component B, on page 32

TABLE 6 - Questionnaire: Respondent B
Tabulation on pages 33-37

Responses from the selected control group, Component B were then correlated to those of the Component A responses with questions/responses coded as indicated.

TABLE 7 - Code of Correlated Questions, on page 38

A chi-square analysis was not conducted on the control group findings nor was a comparability analysis undertaken due to the small numbers of respondents. Analysis of data undertaken between Component A andComponent B using the coding provisions established earlier to compare responses of the two components.

TABLE 8 - Data Analysis-Comparability of Responses

Component A: Component Б

Tabulation by items on pages 39-45.

TABLE 1 -- OPINION SURVEY

Personal Interviews of
Teacher/Trainees

1. Have copy and understand stated objectives of Career Development Project?
2. Were you "selected" for this teacher/curriculum development position or did you volunteer services?
3. What are the (teacher) staff development objectives of the workshop training (staff development) as you understand it?
4. Have you attended all sessions of the RCA Workshops?
    a. Summer (August 1973)
    b. Winter (February 25 - March 1, 1974)
    c. Spring (March 25-29, 1974)
5. Do you have any strong feelings of frustration or inadequacy with the Workshop and/or Teaching Technique?
6. What curriculum development area are you participating in?
7. Do you feel the workshop and handout materials are helpful? Rate 1 - 5 (high).
8. Are you working with a committee or on your own in curriculum development?
9. Have you developed a curriculum outline as yet? (convert to Competencies and Learning Packages)
10. Feels competent to write curriculum? (learning modules)

TABLE 2 -- OPINION TABULATION

Trainee	1. Has copy & understands objectives of career devel. center			2. Selected or vol'trd curriculum development position		3. Understand teacher/staff development objectives of workshop			4. Attended workshop sessions: all summer winter&spring			5. Frustration or inadequacy with workshop techniques			6. The curriculum development area of the participant.	
	yes	no	?	sel.	vol.	yes	no	?	all	sum.	w&s	no	some	heavy	comm& media	fine arts & humanit.
1		X		X	/			X			X		X		X	
2			X	X	/		X				/			X	X	
3			X	X		X		/	X	/				X	X	
4	X		/	X	/	X			X				/	X	X	/
5	X		/	X		X			X			X			X	
6		X	/	X			X	/	X				X	/	X	
7		X	/	X	/		/	X			X	/	X		X	
8	X		/	X		X			X			X			/	X
9		X	/	X		X		/	X				X	/	/	X
10		X	/	X	/		/	X	X				/	X	X	
TOTAL	3	5	2/9	10	0/5	5	2/2	3/3	7	0/1	2/1	2/1	4/2	4/2	8/10	2

TABLE 2 -- OPINION TABULATION (Continued)

Trainee	7. Helpfulness of handout materials					8. Worked with a committee of by self on curriculum development			9. Have you developed a curriculum yet?			10. Do you feel committed to write a curriculum?		
	Rate					com.	self	?	yes	no	?	yes	no	?
	1	2	3	4	5									
1				X			X		X		/	X		
2			X			X		/		X		X		/
3	/		X				X	/		X	/	X		/
4		/	X				X	/		X	/	X		/
5		/	X				X	/		X		X		
6		/		X			X	/		X	/	X		/
7		/			X	X	/		X		/	X		
8					X	/	X		X			X		/
9		/	X				X	/	X		/	X		/
10	/		/	X			X	/	X		/	X		/
TOTAL	0/2	0/5	5/1	3	2	2/1	8/1	0/7	5	5	0/7	10	0	0/7

TABLE 3

Data Analysis - Questionnaire

Program Respondent-Component A

* Questionnaires mailed out - 9

* Questionnaires returned - 4 (40.4%)

* Number of responses for each alternate response by each item:
  Item #1 - Don't know, etc., see page 29 of tabulation of TABLE 4.

* Number of non responses for each alternate response by each item:
  Item #2 - Develop cluster programs
  1 (25%)
  Item #11 - Career Development Center
  Philosophy & Goals D. C. Schools
  3 (75%)

* Percentage for each response or non response each item:
  See page 29 of tabulation of TABLE 4.

TABLE 4 -- QUESTIONNAIRE: Respondent A

PROGRAM / RESPONDENT	1 Development Cluster Programs										2 Meet Individual Needs			3 Time to Develop Curriculum			4 Prepare Industrial Modules								
	Don't Know	Agree	Disagree	0	1	2	3	4	5	6	More than 6	Don't Know	Agree	Disagree	Don't Know	Agree	Disagree	0	1	2	3	4	5	6	More than 6
1		X					X						X			X			X						
2		X		?									X			X									X
3		X			X								X			X									X
4		X			X								X			X			X						
TOTALS	-	4	-	-	2	-	1	-	-	-		-	4	-	-	4	-	-	2	-	-	-	-	-	2
Percentage of response		100%		25%	50%		25%						100%			100%			50%						50%

? Non Response Item

TABLE 4 -- QUESTIONNAIRE: Respondent A (Continued)

RESP.	Exp. Useful in Other Instr. 6				P/Obj. as Comm. Device 7				Team-Group Program Cluster 8			Work as Team 9			Goals 10			Career Devel. Center Philosophy & Goals-D. C. Schools 11						Share Resources 12		
	Not at all	A little	Quite a bit	Greatly	a	b	c	d	Undecided	Yes	No	Undecided	Agree	Disagree	Don't Know	Agree	Disagree	3	4	5	6	7	8	Don't Know	Agree	Disagree
1		X						X		X			X			X									X	
2			X		X					X			X			X				?					X	
3			X					X		X			X			X						X				X
4		X						X		X		X				X				?					X	
TOTALS	-	2	2	-	1	-	-	3	-	4	-	1	3	-	-	4	-	-	-	-	-	1	-	-	3	1
Percentage of response		50%	50%		25%			75%	100%			25%	75%		100%					(3) 75%		25%			75%	25%

TABLE 4 -- QUESTIONNAIRE: Respondent A (Continued)

RESP.	Intv. Works 13			Concept of C/E 14				Concern of C/E 15				Needs of Instr. 16			Learn'g Domains P/O Mixed 17			Rate P/O's Overall 18							Eval. Process 19		
	Don't Know	Agree	Disagree	a	b	c	d	a	b	c	d	Don't Know	Agree	Disagree	Don't Know	Agree	Disagree	Poor 1	2	3	Av. 4	5	Ex. 6	7	Don't Know	Agree	Disagree
1		X			X			X					X			X					X				X		
2		X			X					X			X			X							X			X	
3		X					X	X *	-	X			X			X					X					X	
4		X		X					X				X			X					X				X		
TOTALS	-	4	-	1	2	-	1	1	2	1	-	-	4	-	-	4	-	-	-		2	1	1	-	2	2	-
Percentage of response	100%			25%	50%		25%	25%	50%	25%		100%			100%					50%	25%	25%		50%	50%		

NOTE:

*Highest scale as marked is used in analysis

TABLE 4 -- QUESTIONNAIRE: Respondent A (Continued)

RESP.	Rate Overall Eval. Process (20) Poor 1	2	Av. 3	4	5	Ex. 6	7	Prep. Cluster Programs & Program Outl. (21) 1	2	3	4	5	6	More than 6	Final RCA Handout (22) Most help	Helpful	Of some help	Of no help	Rate RCA Workshop & Overall Module Development (23) Poor 1	2	3	Av. 4	5	Ex. 6	7
1			X					X								X						X			
2						X		X								X								X	
3					X									X	X								X		
4			X							X						X						X			
TOTALS	-	-	2	-	1	1	-	2	-	1	-	-	-	1	1	3	-	-	-	-	-	2	1	1	-
Percentage of response			50%		25%	25%		50%		25%				25%	25%	75%						50%	25%	25%	

TABLE 4 -- QUESTIONNAIRE: Respondent A (Continued)

	Avail. Advisory Committee			Learning Module Examples			
	24			25			
RESP:	Don't Know	Yes	No	a	b	c	d
1		X				X	
2		X		X			
3	X			X	*		X
4		X				X	
TOTALS	1	3	-	1	-	3	-
Percentage of response	25%	75%		25%		75%	

TABLE 5

Data Analysis - Questionnaire

Control Respondent-Component B

* Questionnaires mailed out - 11

* Questionnaires returned - 5 (40.5%)

* Number of responses for each alternate response by each item:
  Item #1 - Don't know, etc., see page 35 of tabulation of TABLE 6.

* Number of non-responses for each alternate response by each item:
  Item #5 - Prepare instructional modules
  1 (20%)
  Item #22 - Voc. Ed. Programs & Outlines
  1 (20%)

* Percentage for each response or non response each item:
  See page 35 of tabulation of TABLE 6.

TABLE 6 -- QUESTIONNAIRE: Respondent B

CONTROL RESPONDENT	1 Devel. outline curric. & program Voc-Ed: Don't Know	Agree	Disagree	2 Stu. needs Voc-Ed Program: 0	1	2	3	4	5	6	More than 6	3 Time to Develop Voc-Ed Curric.: Don't Know	Agree	Disagree	4 Prepare Instrl. Modules: Don't Know	Yes	No	5: 0	1	2	3	4	5	6	More than 6
1		X				X							X				X								
2		X			X									X			X		X						
3		X				X							X			X				X					
4		X				X							X				X				X				
5		X				X							X			X			(?)						
TOTALS	-	5	-	-	1	4	-	-	-	-	-	-	4	1	1	2	2	1	1	2	-	-	-	-	-	-
																		(1)								
Percentage of response		100%			20%	80%							80%	20%	20%	40%	40%	20%	20%	40%						
																		(20%)								

(?) Non-response item

TABLE 6 -- QUESTIONNAIRE: Respondent B (Continued)

RESP.	6 Exp. Useful in Instr.				7 P/O as Common Device				8 Team & Group by Program			9 Work as Team			10 D.C.-Voc. Ed. Progm Goals Used			11 Prop. Seq'd Matls.			12 Indiv. Lrng. Matls.			13 Other related Programs share resources		
	Not at all	A Little	Quite a bit	Greatly	a	b	c	d	Undecided	Yes	No	Undecided	Agree	Disagree	Don't Know	Agree	Disagree	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No
1			X		X					X			X		X			X			X			X		
2			X					X		X			X				X		X			X			X	
3			X					X		X			X			X		X				X			X	
4		X			X					X			X				X			X		X			X	
5			X					X		X			X			X			X			X		X		
TOTALS	-	1	4	-	2	-	-	3	1	4	-	1	4	-	1	2	2	2	2	1	1	4	-	2	3	-
Percentage of response		20%	80%		40%			60%	20%	80%		20%	80%		20%	40%	40%	40%	40%	20%	20%	80%		40%	60%	

TABLE 6 -- QUESTIONNAIRE: Respondent B (Continued)

	Intv'w. Workers			Concept of C/E				Concerns of C/E				Educ. & W'kshop Needs-Instr.			P/O's & Domains of Learning			Overall Rate of P/O's						
	14			15				16				17			18			19						
RESP.	Undecided	Agree	Disagree	a	b	c	d	a	b	c	d	Don't Know	Agree	Disagree	Don't Know	Yes	No	Poor 1	2	3	Ave. 4	5	6	Ex. 7
1		X		X						X			X			X					X			
2		X				X				X			X			X						X		
3		X					X		X				X			X						X		
4		X		X	*		X			X				X		X							X	
5		X		X	*		X			X	*		X			X							X	
TOTALS	-	5	-	1	-	3	1	-	1	4	-	-	4	1	-	5	-	-	-	-	1	2	2	-
Percentage of response	100%			20%		60%	20%		20%	80%			80%	20%		100%					20%	40%	40%	

* NOTE: Highest scale as marked is used in analysis

	Eval. Process			Overall Rate of Eval. Process							Voc. Ed. Programs and Outlines								Advisory Committee			Training in Devel. of Lrn. Mod.			
	20			21							22								23			24			
RESP.	Don't Know	Yes	No	Poor 1	2	3	Ave. 4	5	6	Ex. 7	0	1	2	3	4	5	6	More than 6	Don't Know	Yes	No	a	b	c	d
1	X						X					X								X				X	
2			X		X							X									X		X		
3		X						X				X								X		X---*---X			
4		X							X				X								X				X
5		X					X				?										X	X			
TOTALS	1	3	1	-	-	1	2	1	1	-	- (1)	3	1	-	-	-	--		-	2	3	1	2	1	1
Percentage of response	20%	60%	20%			20%	40%	20%	20%		20%	60%	20%						40%	60%	20%	40%	20%	20%	

41

TABLE 6 -- QUESTIONNAIRE: Respondent B (Continued)

Rate Voc. Bd. Use of Standard Format of Lrn. Modules

25

RESP.	Poor 1	2	3	Ave. 4	5	Ex. 6	7
1				X			
2		X					
3						X	
4*			X				
5				X			
TOTALS	-	1	1	2	-	1	-
Percentage of response		20%	20%	40%		20%	

COMMENT & NOTES BY RESP:*

*Need supplies and equipment to carry out the Career Educational Program. These we lack! (NEGATIVE)

TABLE 7

Code of Correlated Questions

	Component A	(to)	Component B	
Item #	1	X	1	
	2		2	
	3		3	
	4		4	
	5		5	
	6		6	
	7		7	
	8		8	
	9		9	
	10		10	
	11		10	
	12		13	
	13		14	
	14		15	
	15		16	
	16		17	
	17		18	
	18		19	
	19		20	
	20		21	
	21		22	NOTE: (see comments) Inferential relationship:
	22		------(11/12)	
	23		24	(11/12/22)
	24		23	
	25	X	25	

TABLE 8

Data Analysis - Comparability of Responses

Component A : Component B

Item #1 - All respondents agreed that career education in the secondary schools was important for vocational choice.

4/100% 5/100%

Item #2 - One respondent in Component A had not participated in the development of the content outline for cluster programs of the career program areas. Two (50%) had developed only one content outline while one (25%) had developed three content outlines. One respondent in Component B had developed only one (20%) content outline for Voc. Ed. programs, while four (80%) had accomplished two curriculum outlines.

@1 Program/50% @2 Program/80%

Item #3 - All 100% of the Component A respondents agreed that the cluster programs would meet individual student needs-based on statement of student learning desired and performance objectives. Only one (20%) of the component B respondents disagreed with the statement that the Voc. Ed. programs meet the individual student needs.

4/100% 4/80%

Item #4 - All of the Component A respondents agreed that sufficient time was spent in developing the program clusters. One (20%) Component B respondents did not know whether sufficient time had been spent in the development of Voc. Ed. program curricula. Two (40%) indicated that there was not sufficient time spent in the development of curricula, while two (40%) agreed that the time spent on curriculum development of Voc. Ed. programs was sufficient.

4/100% 2/40%

TABLE 8 -- Component A:Component B (Continued)

Item #5 - Two (50%) of the Component A respondents had prepared at least one instructional module, while two (50%) had prepared more than six. One (20%) of the Component B respondents did not respond to this item, no comment or reason for non-response indicated, one (20%) had prepared at least one instructional learning package and two (40%) had prepared at least two such packages.

2/50% 2/40%

Item #6 - All of the Component A respondents agreed that their workshop activities and exercises had been useful in other instructional areas and by degree, split two (50%) as "a little useful" and two (50%) as "quite a bit". Four (80%) of the Component B respondents indicated that formal workshops and prepared exercises had been "quite a bit" useful to them in other Voc. Ed. instructional areas.

2/50% 4/80%

Item #7 - One (25%) Component A respondent understood the performance objective statement to communicate only "what the student will do" while three (75%) correctly indicated an understanding: "to communicate what student will do, circumstances of performance and, degree of accuracy." Three (60%) of the Component B respondents correctly indicated understanding of what the performance objective statement tells us.

3/75% 3/60%

Item #8 - All (100%) of the Component A respondents indicated that team planning and grouping by program clusters and experience was in itself a

valuable experience. Four (80%) of the component B respondents indicated that such grouping was a valuable experience in the Voc. Ed. system.

4/100% 4/80%

Item #9 - Three (75%) of the Component A respondents agreed that teamwork was a more productive method of accomplishing the Career Development Center goals. Four (80%) of the Component B respondents agreed that teamwork in Voc. Ed. and career programs was the more productive method of accomplishing educational goals.

3/75% 4/80%

Item #10 - All (100%) of the Component A respondents agreed that the Leuwell A. Penn Center had purposeful, established program goals. Only two (40%) of the Component B respondents agreed that the established Voc. Ed. goals are published and used.

4/100% 2/40%

Item #11 - Only one (25%) of the Component A respondents agreed that the published philosophy and goal statement for the Career Development Center had a specific statement of seven program goals. Three (75%) did not respond to this item, with no indication for reason of non-response. Three (60%) of the Component B respondents felt there were no published goals for the Voc. Ed. program or that they were not used by the instructional branch or program teachers while two (40%) used the published goals.

1/25% 2/40%

Item #12 - Three (75%) of the Component A respondents agreed that part of the philosophy and proposed operation of the Career Center was to share

common resources. Three (60%) of the Component B respondents agreed that related Voc. Ed. programs in the area schools now share resources. Two (40%) indicated they "didn't know."

3/75% 3/60%

Item #13 - All (100%) of both Component A and B respondents agreed that interviewing workers provides job knowledge and satisfactions which the teacher can communicate.

4/100% 5/100%

Item #14 - Two (50%) of the Component A respondents agreed that the concept of career education should involve preparation for "personal fulfillment." Three (60%) of the Component B respondents agreed that the concept should involve preparation for "appreciation for the dignity of work." While each sample component had respondents who selected "None" as the response, there was also no consistency in the other responses. Two (40%) of the component B respondents marked three of the four possible response alternatives thus indicated a lack of knowledge of the trend and effort to career educate to the world of work.

(c) 0/0% (c) 3/60%

Item #15 - Two (50%) of the Component A respondents felt that career education was concerned with "giving new structure to the curriculum" while one (25%) felt that the concern was "preserving what is good in career preparation" and only one (25%) rightly indicated "the understanding and relating man with the world of work". Four (80%) of the Component B respondents agreed that career education is concerned with "understanding and relating man with the world of work".

1/25% 4/80%

TABLE 8 -- Component A: Component B (Continued)

Item #16 - All (100%) of the Component A respondents agreed that as a result of the workshops and presentations, they felt more comfortable in dealing with CE instructional needs. Similarly, four (80%) of the Component B respondents felt that as a result of formal education and workshops that they were comfortable with the needs of their Voc. Ed. instruction. One (20%) indicated uneasiness in the dealing with the needs of Voc. Ed. as a result of formal training and/or workshops.

4/100% 4/80%

Item #17 - All (100%) of the Component A and B respondents agreed that program developed performance objectives represent a reasonable mix of the three learning domains.

4/100% 5/100%

Item #18 - Two (50%) of the Component A respondents rated developed performance objectives as average, while only one (25%) rated the objectives overall as excellent. Two (40%) of the Component B respondents rated developed performance objectives as excellent while three (60%) rated them as average.

1/25% 2/40%

Item #19 - Two (50%) of the Component A respondents agreed that an appropriate and adequate evaluative process was identified for evaluation of student performance on each performance objective. Two (50%) indicated that they "didnt know". Three (60%) of the Component B respondents agreed that there was an appropriate and adequate, evaluation process identified, while two (40%) were indicating that they did not agree that the evaluative process was proper or that they "didn't know".

2/50% 3/60%

TABLE 8 -- Component A:Component B (Continued)

page 6 of 7

Item #20 - Three (75%) of the Component A respondents rated the overall student evaluative process "average". Four (80%) of the component B respondents similarly rated the overall evaluation as "average". Only one respondent in each of the components rated the overall evaluation process as "excellent". There were none who rated it "poor".

3/75% 4/80%

Item #21 - Two (50%) of the Component A respondents had helped prepare only one cluster program and its program outlines. Two (50%) had helped prepare nine or more programs and outlines between them. Three (60%) of the Component B respondents had helped prepare only one Voc. Ed. program and program outlines. One (20%) had prepared two programs and outlines, while one (20%) failed to respond to this item, giving no reason for lack of response.

4/100% 4/80%

Item #22 - Three (75%) of the Component A respondents found the RCA hand-out exercises and discussion to be "helpful". Only one (25%) respondent with a high scale marking of "most helpful". None rated them low scale "of some help" or "of no help". When compared with item response to Component B items #11 and #12 on learning activities, two (40%) respondents agreed that their Voc. Ed. learning provides properly sequenced materials (Item #11) and four (80%) indicated that their individualized learning activities are multi-media. (Item #12). NOTE: In this comparison the Component A situation refers to staff training exercises while the Component B situations are reporting learning activities provided the

student Voc. Ed. teachers seemed uncertain or indicated "no" (60%) regarding properly sequenced materials.

4/100% 4/80%

Item #23 - Three (75%) of the Component A respondents rated the RCA workshop and overall module development program as "average". One (25%) rated overall as "excellent". Two (40%) of the Component B respondents indicated they had "formal education" in the development of learning modules. Two (40%) indicated they had had 'Workshop-staff training". One (20%) indicated training to include "pre-doctoral study".

4/100% 5/100%

Item #24 - Three (75%) of the Component A respondents indicated they were afforded assistance of an advisory committee. One (25%) indicated he "didn't know". Three (60%) of the Component B respondents indicated they had not been afforded such assistance and counsel for their Voc. Ed. instructional program area. Two (40%) indicated "yes" and that they had received such assistance.

3/75% 2/40%

Item #25 - Three (75%) of the Component A respondents agreed that the examples used in the workshop provided them with "a cross section of several formats". One (25%) responded that the examples provided him with "insight into writing of the program modules and format". Three (60%) of the Component B respondents rated the Voc. Ed. programs use of standard format for learning modules as "average" with one written comment submitted stating "need supplies and equipment to carry out the career educational program. These we lack!" One (20%) said that he considered the use of standard formats "poor".

3/75% 3/60%

5. Evaluative Conclusions

In the February 26, 1973 letter of assurance to the Associate Commissioner of Education, U. S. Office of Education, the first product objective statement of this research and development project was stated as "intent to establish two interrelated pilot career clusters of career development programs in the areas of communications and media; fine arts and humanities. We find that the building site for this project, the former National Geographic Building has in fact been renovated and designated as the Lemuel A. Penn Center. It is located at 1709 3rd Street, NW in Washington, D. C. and although plagued with many contractual delays appeared to be ready to accept its first students with the advent of the 1974-75 school terms.

The second product objective stated for this project was that this R & D project "would provide planning and evaluative capabilities for implementation of a high school level career development program designed to provide job preparation in communications and media--fine arts and humanities." We find that overall the approach and planning for this project may have been too extensive to have been accomplished within the very strict time table presented initially. Delays in obtaining the initial grant approval; bureaucratic policy and procedure within the administration; contracting delays to process and effect project support all led to serious delay. Only persistance on the part of the Acting Director and the agreement of the consultants to "proceed without firm contract" provided services to undertake the preliminary steps toward curriculum and Staff Development. The contracts for renovation of the building were slow in preparation, advertising and award. Actual work, once started, fell behind time-schedule,

materials and work were both delayed and the target of occupancey by 1973-74 school year fell by the wayside and was retargeted for the 1974-75 school year. The Acting Director's persistance and the initial work of the RCA consultants picked up what had been planned as a "six-week workshop to be held during the summer of 1973," and after reprogramming conducted three workshop meetings over the period of time from August 1973 through March 1974. Some teachers were not available for the August 1973 workshop due to the late notice, summer work, or illness. By conducting the reprogrammed training during the school year, not all the designated teachers could be released from instructional duties in order to share in in-service curriculum and staff development training. For purposes of continuity it became necessary to program selected teachers for the training and ask that they then return to their faculty counterparts to discuss their learning experiences and share workshop materials. The "intensive period of training and curriculum planning" was also revised and offered over a greatly extended period of time with some loss of continuity.

The nucleus of staff persons, including the principal to be assigned to the career center, were to also engage in this intensive period of training and curriculum development. Another delay to program expediency was the fact that the Principal/Director was not available and/or assigned to his very important position of leadership and program continuity until November 1973.

The concept of operation entails the release of students from other "feeder" High Schools, where they will be involved in academic studies to the Career Center where they will pursue career job training. This Career Center, and others to follow in the D. C. Schools master plan,

will provide students a choice of vocational training courses within their "strong interest and job aspirations". The Career Center courses, and consequently the thrust of the D. C. Schools Vocational Education, will be directly related to the "entry level" job skills and the realization that more and more youngsters are opting to go to work, and to get involved with "blue collar" jobs which often pay more than the "white collar" jobs available to the college graduate. The Department of Labor now predicts "that three out of four new jobs between now and the end of the decade will not require a college education." By creating the Lemuel A. Penn Center, the D. C. Schools are greatly expanding the list of vocational training courses to help meet this growing demand. It is also noted that another expansion has recently been implemented to convert Western High School into a city-wide school (center) for the performing arts in such fields as theater, music, dance and film making. Such expansion of career and job training capabilities will allow the D. C. High School student to exercise a much broader option regarding listings when making career and job training selection. The work objectives of the curriculum and staff development training and consultant services to be provided by the RCA Service Company were modified and changed by contract amendment to add additional services to be completed in executing Phase II (Spring 74) of the training. After Phase I objectives (Summer 73) we found that the instruments of communication of the status of project development; space allocation; program and curriculm offerings proposed; review of relevant materials and review of the proposed plans for renovation had in many instances not arrived at the teacher level or had not been communicated at all until the Phase I workshop was accomplished. As a result, in addition to the combining of the individual efforts and establishment of a team effort

among the teacher-trainees, there evolved a new experience on the part of the trainee when facing program expectancies and the "real world" of development of the Career Center and the curriculum. There existed a need for the participating instructors to review relevant materials and discuss the proposed programs with knowledgeable personnel in the various fields "according to the RCA Final Report of Phase I training." Additionally as stated, "the affected instructors needed to tour the center and review the proposed plans for renovation." These basic needs had not been satisfied prior to the Workshop. Accordingly, after a limited period of concentration on the review of suggested programs "to identify and determine the need for a particular program" and "to determine the type and quality of education required for entry-level jobs", extensive review of sources of information outside the workshop became necessary. These sources of information were quite extensive and due to their limitation "could not be pursued during the workshop but had not been well coordinated for advance preparation prior to the workshop either."

The majority of the following workshop periods, approximately one week, was devoted to making recommendations for change and/or re-allocation of planned building utilization. These activities resulted in a complete set of recommendations being presented to the architect prior to final bidding on the renovation. They also consumed much of the workshop time programmed for development of the philosophy and goals for the center as well as the finalization of program outlines (curriculum outlines as stated in the RCA contract) for each instructional component within the two career clusters.

Many of the teacher-trainees stated that the philosophy statement as well as the goals and course development as presented in the RCA final

report (App. D) were not in fact made available to them until sometime during the later Phase II (Spring 74) workshops. The Phase I conference (workshop) in August '73 was not necessarily conducted as originally designed. This is not to say it was found not to be successful or valuable to the growth and product capabilities of the staff and teacher/trainees. It was, however, a very frustrating time for the teachers and a time of constant flux and program adjustment by the RCA consultants. However in their own words, "this conference was custom-tailored, and the flexibility and adjustments provided led to its perceived success."

All of the major listed product objectives were accomplished in part or in their entirety with the exception of the establishment of the advisory committees for each cluster program area. This job of establishing the various advisory committees was addressed by RCA teams as a recommendation "to be established in all areas within each cluster". Their final report recognizes that "the area of printing was well supported by its advisory committee; however, in other areas within the same cluster there was little or no visible support." The cluster programs were developed in rough form during the August 23rd workshop and followed by after RCA team consultants had an opportunity to review and further develop the content outlines. Additional staff and RCA consultant activites were accomplished as late as October '73 to finalize the proposed cluster programs. The cluster programs presented in the RCA Summer Workshop final report (App. D) established a proposed outline of content for each program. This outline was not immediately and readily available to the teacher/trainees involved in the program. The RCA team proposed that the "next logical step within each program is to task analyze each program area and state the content in terms of desired student competencies " to be followed by writing action

which "logically leads to stating the program content in terms of behavioral or performance objectives." The RCA team thus established the major perameters for the first Phase II workshop, originally scheduled for November and December 1973 but slipped until February and March 1974.

The previously proposed pilot career cluster programs thus gave away to the newly approvel (after Final Report acceptance in January 1974) cluster programs first published or Appendix D PILOT CLUSTER PROGRAMS December 26, 1973, completing the product objectives of Phase I, curriculum and staff development. The program outlines within the fine arts and humanities cluster focused primarily on the fine arts as opposed to the humanities and was stated in the final report "not complete". Fine arts and humanities did not have a full representation of instructors and the proposed program for music was not complete.

Negotiated contract services were requested for a change to establish Phase II assistance and services by RCA Service Company on September 20, 1973. Intent was stated to provide continuation of a curriculum and staff development project (Phase I) and was tenatively scheduled for November 5-9, 1973 and December 3-7, 1973. The specific objectives of such required assistance was as follows:

A. Direct and establish techniques for deriving competency standards from program areas utilizing task analysis.

B. Review relevant curricula and related research materials collected by school personnel since the Phase I staff and curriculum development conference (8/20-31/73).

C. Assist in establishing advisory committees and identifying community resources as support for the two clusters.

D. Direct and establish guidelines for developing performance objectives.

E. Develop a recommended format for learning modules for both clusters.

F. Direct writing of at least one learning module per program area suitable for instructional purposes.

After consideration by RCA personnel and a planning session for the workshop then scheduled for February 25 through March 1, 1974, the Acting Project Director issued letter instructions to the RCA consultant team dated February 19, 1974, making the following additional recommended changes in the Statement of Work and contractual objectives:

ref. above Item B. That review of relevant curricula and related materials collected by school personnel, etc. be incorporated as an on-going activity during the workshop period.

Item D. Schedule sessions to include instruction and practice exercises in developing and writing performance objectives.

Item E. Provide examples of learning modules that utilizes the format to be recommended.

Based upon workshop (conference) observation by the Auditor/Evaluator, Phase II of the curriculum and Staff Development scheduled activities functioned more smoothly than that of the previous phase. Daily conference schedules were prepared and discussed with the trainees. Scheduled activities were rather broadly programmed in order that some flexibility would prevail and the RCA team provided logical and practical progression from one day's work to the next in accomplishment of the training and curriculum development objectives. As example, for the period Monday, February 26 through Friday, March 1, 1974, the following agenda was presented to include hand-out materials,

practice exercises in those staff development areas called out by the contract amendments and letter of recommendations previously refered to:

Monday, 2/25 - 1-Introduction of Conference Personnel: Washington, D. C. Staff; RCA Staff 2-Introduction to curriculum process: Review of Phase I Staff Development; Management Plan for Program Development; A Model for Developing Instructional Materials; Individualized, Continuous-Progress Learning Systems; and Competency-Based Learning Materials.

Tuesday, 2/26 - Deriving Learning Competencies: Behavioral Analysis
-How to Identify Competencies
-How to Use Task Analysis to Derive Competencies

Wednesday and Thursday, 2/27-28 - Deriving Competency Statements for Pilot Programs

Thursday and Friday, 2/28-3/1 - Writing Behavioral Objectives: Behavioral Objectives Defined; Components of Behavioral Objectives; Writing an Acceptable Objectives; Classifying Written Objectives.

In general, the training conducted was quite satisfactory even though accomplished under rather poor and distracting conditions. The teacher/trainee attendance was well below average (40%-50%). The stated objectives of 15 teacher/trainees programmed. Additionally, the working space and seating arrangement was rated very poor. Trainees were required to be seated in primary and elementary grade size student chairs and at centrally facing small tables. To complicate the instructional progress, where the conference leader required attention at the front of the room, 50% of his audience was involved in a chair shuffling "turn-around". These distractions, when coupled with the fact that there were many trainee and other instructor conversations being carried on at the same time, were detrimental to the understanding and learning process. Personal arguments between trainees not

only disrupted that groups progress in the work accomplished but had a direct effect upon the entire workshop.

It was apparent that the trainees were offered a deeper insight into curriculum development and the whole problem of competency-based instruction than that previously available to them. As individuals, the acceptance and thus "use rate" for the new knowledge would vary greatly within this small group. Prepared materials and procedures presented and accepted, will definitely provide a great deal of standardization.

One of the chief concerns of the Principal/Director was the fact that not all his teacher/trainees could attend the workshops. His concern related to experience lost to the inability to participate in the workshop and the need to pass on, thus absorb, the established staff standardization.

The conference schedule for the following period, March 25-29, 1974 completed the Phase II training:

Monday, 3/25 -- Introduction of Conference Personnel: Washington, D. C. Staff; RCA Staff.

Summary of First Week's Activities

A. Deriving Learning Competencies

1. Behavioral Analysis

2. Using Task Analysis to Derive Competency Statements

B. Writing Performance Objectives

1. Pre-Assessment Package on Performance Objectives

Monday-Tuesday, 3/25-26-Writing Performance Objectives

A. Performance Objectives Defined

B. Components of Performance Objectives

C. Writing Acceptable Performance Objectives

D. Classifying Performance Objectives

E. Establishing Guidelines for Developing Performance Objectives

Wednesday, Thursday and Friday, 3/27-29 - Writing Learning Modules

A. Introduction to Learning Modules

B. Develop a Format for Learning Modules

C. Develop at Least One Example of a Learning Module in Area of Expertise

Again it can be stated that the RCA team made direct inroads into successfully meeting the prescribed learning objectives. The same facility problems and lack of teaching aids or limitations continued to plague the instruction process. RCA staff was required to conduct a contract needs assessment and remain very flexible in order to react and to emphasize areas of need as determined from day to day.

The Assistant Director for Staff Development, D. C. Schools indicated that she felt the most important part of the instruction being advanced at this workshop was the format or standardized process and the writing of the learning packages. This instruction regarding the development of the performance objective; the teaching and learning conditions; the evaluation, with emphasis on "measurable objective of performance" was well presented.

Throughout this week of workshop, the average teacher/trainee attendance was eight. One new teacher/trainee had not attended either of the previous workhops either in the summer '73 or the previous last week of February '74. Needless to say, this individual was very frustrated and lost within the context and materials used for this training period. The week culminated in the trainees presenting their written learning modules and teaching plans for the one exercise they had undertaken in their area of expertise.

The completed exercises were handed in, critique on-the-spot with the trainee and then taken back to RCA Education Services, Dallas, for a detailed review.

During this workshop, the Auditor/Evaluator administered the ten-question opinionnaire during an interview with each of the teacher/trainees (see para. 4, Data Presentation) using a structured interview format. Of the 10 teachers interviewed, only three had not attended all three sessions of the workshop (see Item No. 4). The summary remarks in support of response analysis for that instrument are presented in TABLE 9 -- Analysis of Summary Remarks on pages 59-61.

Following the completion of the workshop training, the teacher/trainees were to return to their respective instructional assignments and to complete the school year. There was deep concern within the group as to how they were to be utilized as a "curriculum committee". They were also worried about an expected additional workload on nights, weekends, or the possibility of spending a summer of work without stipend.

The evaluation of the workshops did not extend beyond the mail-out, completion and return of the prepared questionnaire instruments.

The specific questionnaire instruments developed and utilized are discussed in Chart 4b, paragraph 4 of this section of the report and are displayed at App. #1 and App. #2 in Section IV, Appendix. The comparability of responses analysis provided some interesting insights into the value of such workshop training when compared to a randomly select group of peers, teaching in the same school system, in the same or equal vocational atmosphere. Particularly interesting were examples of experience questions and the subject of development of content outlines for cluster programs or curriculum. The control teachers, Component B, had 80% of the respondents

completing two curriculum outlines while in the program teacher/trainees Component A, even after this training, only 50% of the respondents could indiate participation in one content outline. This would appear to indicate a more experienced curriculum development capability in the Component B, control group.

There are other indications of experience which have good comparability of Component B, control teachers, to Component A, program teachers, and the stated objective of completion of a curriculum and Staff Development Workshop. The response to item #9 indicates the agreement that team work in the Vocational Education and career programs was the most productive way of accomplishing their educational goals. When queried about the actual publication and use of goals, the Component A, program teachers agreed 100% that the Lemuel A. Penn Center had purposefuly, established goals. (Use in the center will come with program implementation-September 1974). On the other hand, the Component B, control group only indicated a 40% agreement that Vocational Education goals are established and used within the D. C. School System.

The response to the Philosophy and Goals statement questions for the Career Development Center, Item #11 Component A, dealt with the specific "seven goal" statement published and approved by the D. C. Schools Staff. The question was designed to measure understanding and recognition of the statement instrument. Only one or 25% of the sample responded and with the proper response. The lack of response on the part of 75% of the sample we feel is an indication of lack of participation in working up this Philosophy and Goals statement as well as an indication of either not being provided copies of same or lack of sufficient emphasis in workshop presentation. Certainly, the Philosophy of and Goals of the

Lemuel A. Penn Center, as well as all Vocational Education in the D. C. Schools is important, to the teacher, more important to the curriculum development personnel, and most important to the School and Center Staff and the Superintendent.

In the development and use of performance objectives only 25% of the Component A, program teachers rated overall objectives as excellent while 40% of the control sample rated their development and use as excellent. As can be seen by reviewing the responses, it appears that the bulk of the curriculum and staff development objectives of instruction were designed specifically to "set" the standard for the Career Center; but, that these items of concentration did in fact have prestige and were of knowledge and within the capabilities of the peer teachers within the system. It also appears that a broader staff training program in curriculum development and standardization could have been carried out within the Vocational Education teacher group. Only pre-agreed formats for standard forms and the desired procedures would have been necessary prerequisites. It is believed that such instruction could have been presented on a regular basis as in-service training within the Career Development and Voc. Ed. programs on an on-going basis. This then could have been followed by a concentrated period of input to the career development and curriculum writing team. We tend to agree with the instructors general remarks that while they feel capable of writing curriculum and learning modules, their work would have to be reviewed and technically finalized by someone more qualified in the field and art of creative module writing.

TABLE 9

Analysis of Summary Remarks

Opinion Question Item No.	
1.	Only three said they had copy of published statement. Most were uncertain of objectives of the Center in some form or manner of speaking.
2.	All were "selected", but only four considered themselves "volunteered."
3.	About 50/50 split on workshop objectives and understanding them.
4.	Seven completed all three of the workshops. One had missed part of the summer workshop and one had not been available for the summer workshop and was ill during the second workshop, February 25th to March 1st.
5.	Only two trainees, felt at ease with the workshop and teaching techniques. Involvement was ranging up to a heavy frustration factor for eight of the trainees.
6.	Eight were working in and assigned to communications and media curricula area. Two were working in fine arts and humanities but assigned to modules of the communication and media curricula.

TABLE 9 -- Analysis of Summary Remarks (Continued)

Opinion Question Item No.	
7.	Five considered the Handout Materials at mid-range value but with reservations ranging down to low scale 1 on a particular workshop or area of instruction. Three considered the value and helpfulness at a four level with some particular reservations ranging down to 1. Only two rated the material in the highest scale and one of those had definite reservations down to a two level on the 1 to 5 scale.
8.	Eight considered themselves as working on their own in the curriculum development task. Seven of these indicated concerns of the committee development procedure, one stated that there was some committee work since other teachers were, "briefed" upon completion of the workshop training. Two considered the workshop staff development training as curriculum committee development, one indicating a trend toward working by self, while the other stated that there was no committee effort in his knowledge outside the workshops.

TABLE 9 -- Analysis of Summary Remarks (Continued)

Opinion Question Item No.	
9.	About a 50/50 split on the development of a curriculum outline. Some said they had come in with an outline or chart, others had recently developed curriculum for new courses but, in the main all indicated they would have to rethink their area and start by developing their outlines and thinking into new learning packages. Seven had real reservations about what standards and (how) the process to be used in developing curricula.
10.	All the trainees considered themselves competent enough to write curriculum packages. Their chief concerns were those of technical writing and the need for source and content specialist. Seven indicated need for curriculum development team efforts and most of the seven were concerned with possible additional workload (while teaching) as well as weekend or summer work without stipend. One was concerned as to whether administration was really serious about a curriculum development team.

6. Evaluative Commendations

The Acting Director of this R & D effort was faced with almost insurmountable odds which were gradually, though rather slowly, overcome. Working intermitantly and only able to provide a limited "part time" effort to the project coordination and management activities, he persisted with arrangements to establish the Phase I training; obtain the contractor for teacher/trainee instruction; obtained that contractors support activities for a summer workshop, when in fact a formal agreement contract did not yet exist. During this aforementioned period he was also the prime mover and coordinator to establish the contractual renovation plans for the center. He was not able to transfer some of these "additional" job requirements until the appointment of the new Center's Principal/Director in November of 1973. The Acting Director is commended for his persistance and continued attention and efforts to ensure project completion and a smooth implementation of the Lemuel A. Penn Center.

The RCA Service Company's Consultant Staff is commended for meeting a most difficult training situation "head on" and retaining their composure and flexibility. With almost daily change requirements imposed in order to meet the project and teacher/trainee needs, the Auditor/Evaluator feels that they rose admirably to the challenges and provided a stabilizing and standardizing quality to the workshops as well as standard formats and procedures for the development of the Center's curriculum and associated learning modules.

The creation of the Lemuel A. Penn Center was provided a vehicle for greatly increasing an expanded shopping list of vocational training. Increased options of learning available to those students who desire a job "entry level"

skill upon graduation from high school is most commendable, particularly so when combined with other master plan learning program expansion within the D. C. Schools.

We commend the teacher/trainees for maintaining their composure and dedication to the project even in the face of the many delays and program changes. Many of these teachers were very frustrated with their lack of direction and understanding yet still worked toward the staff development (team work) and curriculum development, putting in many "extra" hours for which they received no compensation or reservation. Their performance during Phase I and II of this project implementation has, as a group, been dedicated and commendable to the system.

The RCA Services consultant team was well equipped with excellent training materials and workshop hand-outs. It was apparent that they were able to draw upon a large reservoir of such materials, subject based upon previous or other on-going contracts. Their experience in the field of teacher/trainee workshops and curriculum development proved to be most helpful and served to fulfill a very necessary need in the curriculum development process. Because of this consultant teams knowledge and capability, they were able to maintain the flexibility necessary to respond to delays, time changes and program changes while still meeting the bulk of the program process and product objectives set for them.

7. Evaluative Recommendations

The overall program plan and stated project objectives were too extensive to be accomplished in the initially programmed time-period. The extensive expectancies to be forthcoming from a six week workshop were basically a planned impossibility. The Auditor/Evaluator would recommend complete reprogram of any replication attempted, such reprogramming to include consideration of establishing, through in-house curriculum and staff development capabilities and/or by consultants service contract, a Phase I needs assessment, program development, philosophy and goals, as well as project standards and formats for curriculum packages should be developed. After these initial phase activities are completed, a Phase II refinement of actual curricula, matching and using available module materials and the proposed subjective matter for new curricula writing would be input over the period of the following school year, with in-service participation by all teachers and involved staff teachers, the actual curriculum and learning module writing would be completed by professionals technical writers, both in-system and hired as required. The writing could help team effort started over the last two months of the school year and continue through the ensuing summer period with Phase III expected implementation, the following school year. The Principal/Director and his select staff should have ample opportunity for review and change recommendation throughout the curriculum development process. A similar period of staff development should however be the Principal/Director and select staff's concentrated in-service training. There are necessary standards of instruction documentation, evaluation and management, which must be similarly developed for implementation. If the standard for

bidding and letting renovation contracts to the proposed buidling site is determined to be the major time line involved in the project. Then we recommend realistic planning, constant evaluation, and change only as absolutely required to input supplies and equipment and utilities support into an operational building for the learning situations planned. Any curriculum and staff development program can and should be conducted spearately in our estimation. Equipment, materials, facility space allocation and software items should all be coordinated and pre-planned. In most instances, the curriculum learning modules will be written by the professional writer. In our view, we recommend that teachers be used and treated as teachers within the school system, not as curriculum writers or architects and contracting engineers.

We recommend that selected teacher/trainees be trained in the workshop or in-service training vehicle which is provided and not be asked to obtain a "second hand" passing on of learning experience and materials through one who has had the opportunity of participation. This is particularly true when a teacher's "own time and free time" becomes involved in his or her learning process. Stipends should be available to pay for substitute teachers in the event of required activities outside a programmed in-service program. Of the selected teachers for the proposed 15 teacher/trainees, only an average of eight (8) were trained in the workshop sessions and within this number there were many partial day or period absences due to teaching and administration requirements.

Career training is a very worthy curricula effort, particularly in today's job market and student needs. We recommend that full consideration be given to augmenting the master plan of career centers and vocational training to include career education in all grades K through 10th. This, in order

to prepare the students for better selection, based on knowledgeability of careers and job skills required therein, when offered the options of skill training in the D. C. High Schools. Counselling and guidance personnel should not be expected to carry the full brunt of assistance in and with the students career selection and learning a skill trade. Trade organizations and the community should be given the opportunity to work with the school system, and through the system to exert their own assistance and desires for training manpower for staffing replacement needs at the "blue collar" jobs available.

We would recommend the pre-planning, Phase I, organization of advisory committees and community assistance to give active assistance with planning and proposing the programs of instruction. Much of the assistance obtained during this project was on a person to person basis and not an organized and operable committee basis to react to and support consumer demands.

Too much of the valuable teacher/training time was utilized in the building survey regarding renovative plans and contractual activities. We recommend that such coordination be accomplished with the D. C. Schools architect outside, such formal or in-service training programs.

D. C. Schools Philosophy and Goals statements, when consumated and published, should be provided to each staff and teacher incumbent. Many of the respondents indicate lack of goals or guidelines to direct their instructional efforts. We recommend a review of this program to ascertain that all teachers and staff members have, understand, and apply their educational efforts to fully utilize the published goals and guidelines.

We recommend that the Career Cluster Programs be fully augmented with completed learning modules and teacher lesson plans as soon as is practical

under the current funding and manpower limitations. Decisions must be made regarding those cluster programs in the arts and particularly the humanities which are to be retained at Lemuel A. Penn Center or offered elsewhere within the system. This project seemed to conflict in proposed career clusters with other programs to be offered as example at Western High School. Proposed program clusters included music, and yet the music program planning was incomplete and not capable of development as a program for Lemuel A. Penn Center due to lack of space.

We would recommend that every effort be made to provide a training atmosphere more suitably proper for adult teacher/trainees. Seating and table arrangements are of utmost importance for the conduct of a continuing hour-upon-hour workshop. To be seated in a "squatting" position, hunched over an intermediate student table is not conducive to the adult thought processes. Proper back-up aids of blackboard, adequate to the full view of all participants and the availability of Vu-graph or some other hardware item capable of projection of transparancies does not seem unreasonable for good instructional support. Discussion of topical matter must be controlled to keep trainees "on track with the training objectives" and to ensure elimination of as many personal problems or ego serving situations as possible. Many such interferences were observed and undue repetition diluted the learning accomplished. Such lack of control by the consultant staff precipitated personal arguments between trainees on more than one occassion.

It is recommended that future agendas for training of teachers in curriculum development contain a more extensive time element devoted to: standard formats; development of the performance objective; teaching and learning conditions; evaluation which emphasizes "measurable" objectives

of performance; and, more first person advisory and correction assistance by the instructors and staff.

We would further recommend that the use of published standards, a policy and procedures manual and standard formats for learning modules and teaching plans be established within the staff or worked out under contract with consultant. These materials, made available to the selected teacher/trainees, would thus circumvent the research and development time, effort, and dollars which went into the initial program frustration for these teacher/trainees. While the materials and recommendations made by the RCA consultants were for the most part valid and accepted by the concerned staff, we feel it necessary to point out that little "new" material was developed during the workshops.

B. Major Audit Responsibilities

The audit responsibilities were approved, and stipulated as proposed by the Audit/Evaluation team. They followed program auditing techniques based upon external reviews designed to verify results of the evaluation and to assess the appropriateness of internal procedures for determining the effectiveness of project operations and management. As one of the major tasks, an examination was made of project records in order to determine the degree to which each of the preliminary steps to curriculum and staff development were met. Another major audit task was to provide periodic verbal reviews (reports) and to maintain close liaison with the project director.

1. Data Collection Procedures

The primary collection technique was to interview the Project Director, or as later appointed, the Principal/Director, to question their development of a documentation system. The administrative activities of the project; and, to review those documents and records available or which could be made available to the Auditor/Evaluator. Official records and documentation were reviewed and copies of the more pertinent documents were obtained. Due to the extensive and varied development of project objectives in the initial proposal, and as changed over the extended lifetime of Phase I and II periods of the project, the statement of the initially expected units of performance were vague or totally lost. This failure to follow specific statements of objectives of project intent presented a great difficulty within both the evaluation and the auditing tasks. The RCA contract specified a statement of work which was "service" oriented to provide organization and execution of the staff and curriculum development

program but stated no requirement and/or guarantee of teacher/trainee performance. There was also an extensive delay in the RCA contracting process and the requested amendments or changes were not signed or officially executed by both parties. Contract changes and actual service operation was based primarily upon both verbal and letter instructions of the Acting Project Director. Such changes of procedure made the "tracking" of project operation difficult. Other documentation was made available to provide supplemental data used by the Auditor in the validation of results of the questionnaires. Materials provided to teacher/trainees as well as the published instructions were also provided to the Auditor. Throughout the project period data collection was conducted by the review, pull-copy, and file procedures. Where a limited documentation was encountered (or non-existent) return visits and further interviews with management and staff personnel were utilized to obtain pertinent information. Internal "memoranda" for file purposes were accomplished after these interviews by the Auditor.

2. Data Analysis Procedures

Documented project activities and operational procedures were selected from the documentation file and comparative analysis made with the observed project activities and stated opinion or judgment factors of teacher/trainees and project staff. Analysis of data was necessarily limited to determine: what was planned or how it was modified, what was done by what date, what will be done in the future, who is responsible, and what was the condition as of completion of Phase II of the training in May 1974.

Interview responses and auditor's findings were then coupled with documentation in the analysis process. The procedure for data analysis of

the information obtained from the questionnaires included the procedure of: tabulation of the number and percentage of questionnaires returned; tabulation of the number of responses for each alternate response for each item, and the number of non-responses for each item; tabulation of the percentages for the previous procedure; tabulation of the number and percentages of responses to each alternative for each item across components where the items, and therefore the objectives upon which the items were based, are common to two or more components within the program; presentation of the information in tabular format; and where appropriate, a graphic presentation format. Analysis and evaluation of all materials was then followed by preparation of this final report.

3. Data Interpretation Procedure

Project documentation was reviewed and interpretation based upon the auditors verification from operational program materials, statement of RCA consultant staff and/or statement of teacher/trainees or project administrative staff. Judgmental responses and statements of opinion were collected relative to the degree of completion of the program objectives as stated or understood as project goals. As previously stated in Section I, the non availability of the proposed follow-up interview did limit the breadth of materials and opinions available for the final overall interpretation. Product objectives, as restated for and within RCA contract statement of work or letter of instruction, were carefully screened and observed over Phase II of the project. Where a divergance or lack of understanding was observed or determined through the questioning/interview process, shortcomings and danger areas were discussed with the Principal/Director and the RCA consultant personnel.

Throughout the actual auditing of the seminar/workshops, the data presented and utilized by the teacher/trainees was collected and cross-referenced to that previously made available. Interpretation of actual use was a judgmental factor on the part of the Auditor with the exception of observed preparation of exercises and first hand personal presentations of exercise work by the teacher/trainees. In this respect, the Auditor did not have teacher/trainee prepared materials made available nor were there teacher curriculum outlines or prepared learning modules, completed or made available for product objective documentation. Initial teacher/trainee input of curriculum outlines and learning modules as a classroom work-exercise was observed by the Auditor during Phase II workshops.

4. Data Presentation

In a staff memorandum to the Contract Specialist, Negotiated Contracts Services Division, under date of September 20, 1973, the Assistant Superintendent, Division of Career Development Programs requested the preparation of a negotiated services contract with the RCA Service Company to perform assistance with the project "Career Development Center." The services requested were to provide extensions of and "to continue a curriculum and staff development project of August 20-31, 1973 (Phase I)."

Assistance required was specified as to:

A. Direct and establish techniques for deriving competency standards from program areas utilizing task analysis;

B. Review relevant curricula and related research materials collected by school personnel since the Phase I staff and curriculum development conference (8/20-31/73);

C. Assist in establishing advisory committees and identifying community resources as support for the two clusters;

D. Direct and establish guidelines for developing performance objectives;

E. Develop and recommended format for learning modules for both clusters;

F. Direct writing of at least one learning module per program area suitable for instructional purposes.

The RCA specialists needed to conduct these services were specified to include:

A. One Program Development Specialist

B. One Media Specialist

C. One Curriculum Writer

D. One Community Relations Consultant

Phase II final reporting was also specified in order that a contract could be prepared and negotiated for the performance of these services.

On the following day, September 21, 1973, the budget change request was submitted for the "Career Development Center" Project, Project No. V3610596, Grant No. DEG-73-2992, to the Program Development and Operations Branch, DVTE, Office of Education. This budget, when reviewed by the Educational Programs Specialist, DVTE, was returned for clarification and justification of change items. In brief, the explanations were centered on the following change justifications transmitted to DVTE, Office of Education under date of October 3, 1973. They were: Allocation of Teachers' Stipends, originally based upon fifteen teachers and a six weeks workshop. A balance of $13,311. was justified as reprogrammed to RCA Education Services, substitute teachers, and consultants in order to conduct the reprogrammed workshops in November and December of 1973. Secondly, with that justification was the added presentations of the delay in obtaining a contractor in sufficient time to conduct the six weeks workshop, the necessity to shorten the summer workshop to two weeks and to ensure the RCA specialists continuity in the program beyond this first phase effort. The third area of discussion clarified the incorrect listing of a portion of the salaries for a curriculum specialist and staff development coordinator under the cost of sharing state and local funds. Since these salaries were paid out of Federal funds they could not be used as "local cost sharing". It was necessary to replace these line items as partial salaries for a TSA-8 assistant principal and a TSA-15 counselor paid from local funds and used for this cost sharing. All items and reprogrammed dollars were

accounted for within the original allocations approved in the grant. The request was approved and stamped signed as "no additional funds authorized" by the contracting Grants officer.

On October 31, 1973 a memoranda to the Project Supervisory Director from the Contract Specialist stated that "funds for the subject amendment which had been processed and held since October 10, 1973 were still not available." The request was thus returned to the Project Director with the statement "when funds are available, please resubmit allowing a minimum of forty-five days processing time."

The acting Project Director and newly assigned Principal/Director were required to retrace the various reprog.amming actions and requests through the Superintendents Staff, School Board and Government of the District of Columbia, Bureau of Material Management.

An Amendment No. 1 was issued to RCA Service Company contract No. 74032 by the D. C. Government Bureau of Procurement which was an Amendment of Article I Statement of Work and added (but did not substitute for previous statement items) six tasks with stipulation of 30 man-days work over two one week periods-tentatively November 5 and December 3, 1973. It should be noted that these dates were tenative only and were not changed to reflect the actual dates of performance later programmed. Article II Reports were amended by adding requirements to be met "on or before January 1, 1974" a date later changed by program slippage but not amended or changed in the contract amendment No. 1 Article IV-Consideration and Payment deleted previous language and substituted a fixed amount payment for performance. Established a new payment schedule and standard instructions and agreements on invoices submission, certification and subcontracts language. Article VIII Equal Opportunity Obligation transmitted the standard Equal Opportunity

Obligation Statement required of all constructors and subcontractors by the District Government.

As of the date the Auditor reviewed this Contract Amendment it had not yet been signed by the parties of the contract. It was not dated by either party and not yet noted as having been accepted by the District Government. It is thought to have been written as a part of the work accomplished in October by negotiated contract services which was returned as a package to the Project Director, October 31, 1973 for lack of funding, approval of reprogrammed funds as requested.

Electing to continue the operational coordination of Phase II, the Acting Porject Director and Principal Director arranged for RCA Service Company staff to conduct the two, one week seminar in-service training programs. Verbally the unsigned Amendment No. 1 was discussed and Statement of Work accepted by the RCA staff. In both the verbal discussions and in a letter to the RCA Manager of Curriculum from the Assistant to the Assistant Superintendent Department of Career Development Programs, dated February 19, 1974, Article I -- Statement of Work was modified.

The process for the Phase II workshops was to accomplish the Amended Statement of Work format, as further changed by letter, to provide the services and direction as previously specified. Under the process audit and evaluation of objectives as understood by the RCA staff and the Project staff, it was generally agreed that, as stated in the management staff evaluations, the RCA team "fullfilled each of the goals and work objectives. There was one major exception, that of the establishment of advisory committees as per the statement of the Principal/Director," little attention was directed toward establishing a systematic approach to selections in

TABLE 10 -- LETTERS OF EVALUATION
FROM STAFF PARTICIPANTS

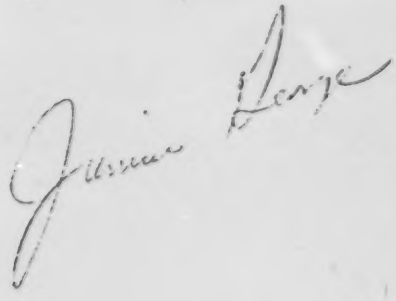
Assessment of Curriculum and Staff Development Workshop

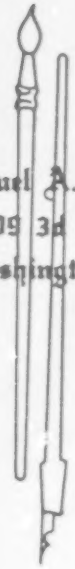
Summer 1973 - Spring 1974

The Communication and Media-Fine Arts and Humanities Curriculum and Staff Development Workshop conducted by representatives of RCA Education Service Division, in my opinion was highly successful.

At the beginning of the workshop, August 20, 1973, participants from the vocational and academic schools had no previous experience in working together. The RCA consultants immediately showed the participants commonalities between programs and employed proper techniques and strategies to correlate planning. After approximately one week of working cooperatively as a unit, fine arts teachers were correlating planning and drafting and printing teachers. A very wholesome attitude of sharing was developed at the very beginning of the workshop and prevailed throughout the summer and spring sessions.

Reports of participants indicate that the experiences were most beneficial and vital to the development of program for the Lemuel Penn Center.





Lemuel A. Penn Center
1709 3d ST. N.E.
Washington D.C. 20002

April 30, 1974

Mr. Donald C. Pricer
3316 Prince William Drive
Fairfax, Va. 22030

Dear Mr. Pricer:

As program director of the Lemuel A. Penn Career Center, this letter is written in response to your request for evaluative data concerning two RCA Staff Development Sessions of which I was a participant. (February 25 - March 1, 1974 - - March 25 - March 29, 1974).

The evaluation has been considered in the light of two major questions, (1) how well did the RCA Team accomplish the major goals and objectives as stated in their contract (2) did the process bring about observable changes in participants ability to develop curricular modules?

The RCA Team lists five major work objectives on page one of the negotiated services contract No. 74032. The RCA Team in my estimation fulfilled each of the five goal statements adequately with one exception. This exception listed as (c) under the contract and refers to the establishment of advisory committees. While conversations relevant to this issue were indicated by me during the February 25, 1974 sessions little attention was directed toward establishing a systematic approach to selections in this area. Failure to achieve stated objectives in this single area, tend to reflect upon the success evidenced in each of the four remaining areas.

Problems encountered by the team in covering all areas were a result of varying degrees of participant familiarity with Career Education concepts and may well have caused this over-sight.

Observable changes in participants ability to develop curricular modules was in evidence as sessions proceeded.

Participants organized and planned sample class activities considering accepted methods for module development. Observation of individuals in carrying out assigned tasks in a structured and systematic manner was considered the most successful accomplishment achieved by the team.

In summary it is felt that these activities could only be viewed as a highly successful venture in bringing about needed curricular change in Districts Schools.

Sincerely,

George C. Gordon
Director

GCG:sw

DRAFT

Dear Mr. Pricer:

This letter is to give you my assessment of the staff and curriculum development workshops 1&11 for teachers and staff at the Lemuel Penn Center Career Development Center during summer of 1973 and spring of 1974. The workshops were conducted by the Educational Services Division of the RCA Corporation.

I found the RCA staff to be very resourceful, they readily identified the problems and needs of the group and developed the appropriate strategies needed to work at meeting these needs.

The workshops were well organized with a sufficient amount of resource materials needed to accomplish the tasks.

The feed back I received from the workshop participants was generally favorable toward the workshop activities and the workshop staff.

I hope that these statements are sufficient for you in your task of evaluating the project. If there are additional specifics please feel free to contact me.

Sincerely,

Josie M. Cole
Assistant Director
Staff Development

this area. Failure to achieve stated objectives in this single area, tend to reflect upon the success evidenced in each of the four remaining areas." Staff process evaluations were requested from four D.C. Schools Staff members. Three were actually submitted and one attached TAB 10 -- Staff Evaluations (1-3).

The Project Management process extended throughout the period of initial planning and until November 1973, with the assignment of the Principal Director, as the additional responsibility of the Acting Project Director. When assigned in November of 1973, the new Principal Director began the process of building the separate Project documentation file. A system was not in being or formally developed. Files were built from the management actions and documentation of the several action agencies involved and required considerable time to compile.

Staff and curriculum development for the teacher trainees was initially planned to be conducted on Saturdays and evenings during the first semester 1973-74, per memoranda of instructions dated June 25, 1973 and signed by the then Supervising Director. Audit of the process indicates that this additional staff and curriculum development training did not develop and only those exercises (hand-outs) used in conjunction with the workshops (2/25-3/1/74 and 3/25-29/74) were used to accomplish this process outside the workshop time periods, Phase II.

The Principal/Director provided teacher/trainee assistance in the development of staff and curriculum responsibilities under memorandum to Center (select) Personnel; dated February 7, 1974, a definition of the two types of evaluations (to be used as concept policy), an outline of the Summative Evaluation Model to be used for the Center and a copy of selected

materials to serve as standard for developing behavioral objectives. The staff was requested to include the development of plans for evaluation (formative) for all internal programs from this date forward. The RCA staff carried this process into their instruction and workshop activities and the comparison of student development to the stated program objectives.

A Formative Evaluation Model was conceived and published by the Principal Director and Assistant Director of Research and Evaluation to specify the internal evaluation of programs and as a guide for process after February 14, 1974. Goals revision became the first order of business in the RCA workshop, February 25 through March 1, 1974. Internal evaluation was thus made part of the process of workshop and curriculum development throughout the spring of 1974.

The final process activity considered herein and documented by the Center Principal Director was that of follow-up action on the workshops and curriculum development. A staff and faculty meeting was called for the Center on April 30, 1974. Major topics of discussion and action were:

A. Summer 1974 schedule planning

B. Development of curriculum modules

C. Use of Graphic Arts

D. Implementation program and plan -- 1974-1975.

5. Audit Conclusions

An obvious conclusion can be drawn from project progress to date: that the planning and evaluative capabilities for the implementation of a high school level career development program is almost one year behind the proposed and planned project implementation date. Short of not being able to

immediately obtain a consultant contract to provide the assistance with curriculum and staff development workshops, the building renovation delays in contracting and constructing would have dictated such a delay. In short, if the original planning had been followed to provide teachers and staff with the necessary training and guidance required to provide curriculum writing, the major delay in the building renovation track would still have delayed the project until its completion in August and September, 1974.

If these two major project delays could have been forseen, then a more appropriate project teacher and staff training process might have been developed for funding under this grant. The fact that a full time Acting Project Director or Coordinator was not assigned to these management responsibilities, was reflected in the general staff support attitude encountered by the Auditor/Evaluator. This reflection of leadership and the "built-in" bureaucratic system delays appear to have taken their tool on project success. Much time was wasted during the workshops in order to orient, question, recommend change and plan actions, which should have been foreseen and an alternate plan of action established to alleviate the situation. Teacher/trainees verbally and in questionnaire response, indicated thay felt "left out" of the planning main stream of the project, and further, that when they did develop recommendations for the Center facilities and operation, that their change in-put was that of a wasted effort when not used. Even if their recommendations and individual effort were not used, certainly their efforts should have been acknowledged.

The delays of building renovation were such that the planned audit of that factor of cost transportability was not feasible. The delay in obtaining

the supporting contractor for the curriculum and staff development training was (in order of encounter): A) USOE approval, which was a period of approximately five months; B) RCA Service Co., a responsive bidder, but establishing some new direction within their proposal visa-vi the D.C. Schools proposed R & D Model as stated to USOE; C) Contracting Coordination and negotiation, both in the Curriculum and Staff Development Area (RCA Service Co.) with major modifications in September and October as detailed in Section II, B, 4, and the contracting of work based on the architects activities to meet building renovation time-tables; D) Request for Proposal for the third party Audit/Evaluation was delayed during a search for expected respondents, in fact this Auditor respondent was advised of tentative selection in September of 1973 but not formally offered contract until February 22, 1974, a five month delay and three days after the start of the first of Phase II workshops by the RCA staff; E) Contractor work and materials delays in the building renovation contracts during the spring semester 1974, with Contractors changes leveled at "plan changes" also causing added delays and stretch out.

These then, were the major delay factors encountered in the R & D project and the building renovation program necessary to facilitate implementation of the Center and educational program starts.

Many of these management and coordinating jobs were burried in a model of administrative actions and interrelated approvals which would delay the best planned project. The community relations specialist failed completely to follow up and establish the very important community advisory committees or to adequately identify community resources. Much of the recommended

format and standards for the curriculum modules and staff writing came directly from the RCA staff with little or no input by D.C. School staff and/or in particular from the teacher staff in training. This is not to say however that their use by the teacher staff will not, over time, modify and improve their present form; or, that they are inadequate for the expressed needs of the project. Acceptance and better use would have undoubtedly resulted with a closer teacher and staff participation in their development.

Section II B, 4 details the use of contract change procedure outside the authroities stipulated to the contracting officer. Since this contract dealt with a Grant from USOE and not carry over funding -- reprogramming of funds by D.C. Government may not be a particular problem. The Auditor/ Evaluator however was unwilling to accept word-of-mouth or letter changes as legal and formal. In fact, due to delay of receipt of evaluative materials the Auditor has been forced to extend reporting deadlines of stipulated contract and the change approval period granted.

Change justification to USOE, necessary to reprogram funds to "stretch" the project time-lines and required services, again met with an inordinate delay write similar to initial Grant approval but were finally approved, thus ensuring continuation of the training and contractor continuity. There was evident delay awaiting this approval action within the D.C. Government Business Management and the Negotiated Contract Services Division. These delays forced contractors to accept the risk of work statement change action without a formal approval of same. The Acting Director assured all parties of his direct assistance in coordinating reports approval and final payments (a verbal assurance).

The RCA Service Company staff, though short in numbers and time, did meet all the Curriculum and Staff Development objectives for the contract with the exception of the establishment of Advisory Committees and Community Resource Listings. Teacher/trainees and D.C. Schools staff generally agreed that the contractor adequately met their objectives. The structured procedures for development of the curriculum modules and the assistance in modulan develapment and writing is considered the most valuable contribution by the RCA staff. The individual staff members were found to be most successful and experienced in needs assessment, role playing, and relating to individual trainee problems or lack of understanding. The RCA Educational Division resource materials were excellent and quite extensive. In fact, there were times encountered in which the resource materials contained too much depth of content and were thus confusing when allocated to the training requirement and specific programmed development for the Center.

It was appparent that the Center staff and program teachers were still "behind" in accomplishing the curriculum modules and teaching plans necessary to implement the career education program in the fall of 1974-75. Of all the curriculum programs proposed in the approved program listing as of May 15, 1974, approximately eight percent were in some modular form identification or writing. This represented at least one module per individual teacher/ trainee workshop effort. These modules were discussed with the individual trainees and returned to RCA Educational Services Offices for rewrite and finalization as time permitted by the RCA staff.

In the judgement of the Auditor/Evaluator, the direction and/or model for the program evaluation within the Center is adequate for planning input

to date. Actual practice and operational activities will provide change/needs assessment practice and refinement as the program progresses. Development of objective task measurement of the learning process was assured within the curriculum module format for each module and t aching plan.

Returning to the original proposal and the preliminary steps to curriculum and staff development which were to be carried out, conceptual changes were also forced by the slippage in time frame and reprogramming of funds, and the availability of personnel. The review of manpower studies and surveys of fine arts agencies and institutions, also the graphic arts industries were accomplished in a limited manner to "determine the kinds of job opportunities available." No listings or documentation was available or provided for Auditors purusal and staff statements confirmed that interested teachers had accomplished these surveys for "their area" of curriculum development. They also reviewed and determined the type and quality of training required for entry level jobs. The review of curricula and material presently available within the D.C. School System was accried out by both teacher/trainees and staff. Based upon statements of the RCA staff and D.C. Schools staff personnel the development of an overall structure for the interaction of the program elements (while sharing resources and facilities) must develop piece-meal with the curriculum modules and the program element implementation. Certainly the teacher/trainee and staff have developed a cooperative planning capability and a sharing attitude during the workshops.

The development of curriculum outlines for each instructional component within the two career clusters was changed in concept as recommended by the RCA consultants and approved within the D.C. Schools staff. After the

summer workshop and with the further development of the staff and planning, the determination was made to use cluster programs as an outline of content proposed for each program. These cluster programs were then analyzed to state content in terms of desired student competencies and behavioral or performance objectives. The original pilot career clusters had been developed to present: course description (curriculum outline), Nature of Work statement, and a Job Opportunities statement. The adopted revisions of cluster programs displayed the cluster statement to identify the broad program areas, followed by the detailed program outlines to specify the learning modules and training operations. This development of cluster programs was completed with staff approval and used as a common basis for working within each cluster and program cluster interface. In Phase II workshops, the common goals and performance objectives were to be developed. The RCA staff found that the time planned for the actual development of the goals and performance objectives was generally insufficient since much of the training effort had to be directed to that of the technical training and understanding of standards being stipulated for statements of student competencies and the behavioral or performance objectives.

The development of a meaningful program of production activities to enhance the instructional programs became a part of the development of each program outline (operational) and was left to the teachers conscious response to student learning and practical experience. Further evaluation of the curriculum modules and actual teaching plans, plus operational training activities of the student in the classroom shops will be required. The question remains, is the student receiving practical experience in production

of materials for distribution to the schools and community? Learning modules development appears to point in that direction.

Student evaluation and evaluative criteria is to be developed as a part of the learning module. There was no emphasis place on instruments appropriate for such evaluation from available sources such as the schools, colleges, institutions and industrial organizations. Also there was no review conducted for the purpose of determining their possible proper use in this program. The use of special tests and other evaluative devices to determine student performance and progress, in fact, as stated that they "will be devised", was not accomplished during this period.

The plan for outside evaluations to be conducted on a periodic basis was not devised. The only evaluation plan considered and prepared for the program through Phase III was formative in nature and developed in conjunction with the Assistant Superintendent of Research and Evaluation Office.

The means for continuous planning for the center after implementation of the clusters, had not been fully devised during this period. The Principal/Director was of course planning to be responsive within the overall D.C. Schools stated requirements and control planning procedures.

Program promotion and public relations were not being pressed, primarily due to time table stretch out and because of the retention of program decision actions regarding the center and implementation at the D.C. School staff level. Teachers complained of this "lack of faith" in their capabilities of program development. This attitude also appeared to have effect on the development of student and transportation schedules for Fall 1974-75 implementation

Workable schedules for the feeder high schools interface of students desiring to attend the Center were proposed for consideration within the transportation network and Metro schedules (items no. 8 and 10 of letter of assurance to USOE).

The development of a review of unit requirements for electives, with respect to overall requirements for graduation, was yet to be accomplished as based upon developed curriculum and its evaluation. The effort to obtain maximum credit for the center studies will be strongly pursued by the Principal/Director and his staff.

Selling of students products as created in the studios, laboratories and workshops, is still in the planning stages. The development of a "store" is a goal of the Center development, but like many items, requires space allocation. Management of facility and the space availability for "nice-to-have" items may dictate omission of this plan for a store or sales outlet.

The Principal/Director and D.C. Schools staff are continually developing and/or modifying the schedule and time table for accomplishing the stated goals and objectives of the Center. The goals and objectives have been written up, accepted and implemented for the Center. Initial target dates of the time table have already suffered one years slippage as previously discussed.

The requirement to plan and organize, a counseling service for the Center had not been fully addressed within the centers planning by end of May 1974. This was a planned action for the Center staff and was expected to be corelated with the overall counseling program for career development within the first semester 1974-75.

Staff requirements and personnel qualifications were reviewed first in the spring and during the summer of 1973 by the Acting Director and D.C. School staff. Upon his assignment in November 1973, the Principal/Director reviewed these requirement and the qualifications assigned or tentatively assigned personnel. Staff development needs were initially responded to through the RCA workshops and follow-up training. An in-service program is planned. A procedure for recruiting staff for the Center has been developed by the Principal/Director.

The development of advisory committees for the pilot clusters remains to be accomplished. Our committee was organized and partially functional in the communication and media cluster program (printing). The Principal/Director and his staff will now have to spread their already over loaded effort in order to approach and obtain committments to serve from representatives of the Board of Trade, Civil Service Commission, local business and industry, cultural institutions and agencies, and within the public and private schools. These advisory committees represent a major development and planning project for the summer and fall 1974. The committees should play a major role in assisting with the on-going evaluative process and in developing cooperative training and placement opportunities. Without this vital link to government agencies, industry, cultural agencies and schools there will be a continued sense of "floating" without any direction by the Center staff and teachers.

6. Audit Commendations

The staff of the Educational Division, RCA Service Company is commended for pulling together a very general training plan, and directing and coordinating a looselyknit group of teacher trainees who, when once pulled together for the joint effort, produced the desired initial learning module products. Format standards and procedures adopted were principly those of the RCA staff and we would expect some modification or change as they are adapted to the use of the Lemuel A. Penn Center and local staff experience. The RCA staff met their stated assistance and training objectives with exceptions of the formation of the very important advisory committees for the curriculum programs.

Mr. George Gordon has done an outstanding job of pulling the project together and providing the highly necessary leadership for the Center since his assignment as Principal/Director in November 1973. Working extended hours and initially without clerical assistance, he pulled the new staff together and gave them a real sense of direction. His appearance is that of a good leader, fair and just in his personnel management decisions and most all, very knowledgable in the goals and objectives of the Career Education development. We expect that the growth and successful development of the Lemuel A. Penn Center will in great detail reflect the strengths of this educational leader.

7. Audit Recommendations

That any replication of this planning and evaluation procedure for project development be considered would certainly not be recommended. Had the effort been expanded to a curriculum and staff development plan of perhaps one or two years duration, with assigned staff, curriculum development specialists and a

more thorough evaluation of local capabilities, requirements for support and community assistance would have assumed greater success. The attempt to complete and implement curriculum modules for two rather extensive pilot program clusters, in such a short time period could but pre-destinate a failure or, at best, only partial success. We would recommend consideration of a plan which would assure a more meticulous and thorough project development.

A. Initial planning must include an interest survey of the student interest in a planned program which will provide them with pre-requisite skills and knowledge for post secondary technical education or entry level jobs. The primary goal of this project should be to develop such a program around the local student needs.

B. During this first year's phase, a classification and quantification of the D. C. students in terms of their interest in communication and media; arts and humanities occupations, both technical and job entry skills and training, should be accomplished. The proposed curriculum outlines and areas of occupation skills would be measured for definition of student interest or requirement.

C. Next, we feel there should be an identification of the existing technical occupations in the proposed or needed career clusters in the District of Columbia. These clusters might well change dramatically over those presently chosen for pilot career clusters by the D. C. Schools staff.

D. There should follow a determination of the number of present and anticipated positions in each identified technical or career occupation.

E. A determination of the requisite skills and knowledge associated with each identified technical occupation would then follow.

F. Course content in post secondary technical education programs would then be assessed to complete the first years Phase I activities.

The second year, project Phase II, would program the following activities for completion:

A. In depth assessment of the existing curriculum as to: 1) content (skills/knowledge taught), 2) effectiveness, 3) cost.

B. Development of performance objectives with representative criterion test measures for courses in technical and career skills and knowledges. These objectives developed may not necessarily be a complete listing of those which should be included in the courses.

C. Development of specialized curriculum modules and teacher guides for selected courses for technical and career education students.

D. Produce and disseminate a technical career course guide for the D. C. Schools. This guide would provide counselors and students with detailed information and guidance on program paths for those who aspire technical job skill training and post secondary technical education. It would also serve as a guide for Career Education K-10.

Phase III of this recommended model would provide program installation with the following major tasks to be completed:

A. Orientation of the community to Career Education and technical job training educational process.

B. Implementation and validation of the specialized courses.

C. Supplementary curriculum development and expansion to new career fields as needs requirements dictate.

There was no specific information or data available to the Auditor/ Evaluator in the humanities area. Music appeared to have been dropped from the arts cluster and is known to have been included in the implementation of program modules at Western High School. Therefore we recommend a very thorough review of the Lemuel A. Penn Career Clusters in order to insure that system wide duplication has been eliminated, unless student learning needs dictate multiple programs. Needs assessment should be made each year within each "Center" and system wide in order to assure continued effectiveness and elimination of duplication or best utilization of available educational resources. It is further recommended that other student needs within the major program areas of Business, Social Services, Engineering and Industrial and Health fields be surveyed where concentration on so called "hard" skills and post secondary job entrance would more readily provide employment and satisfy community needs than that of the arts and humanities clusters presently being developed.

The Lemuel A. Penn Center Principal/Director and staff are encouraged to immediately follow up and establish the required Community Advisory Committees for the various career clusters. They should identify available community resources and assistance available to their center, and encourage a close bond of assistance with community, D. C. government and federal government agencies.

Federal guidelines for special project grants and monies to support such projects at these are necessarily quite detailed and require understanding and careful attention by the Project Director at the local level. We recommend that submission of proposals, letters of intent and required attachments be carefully prepared and then reviewed by a more knowledgable

third party prior to submission. This same action should be applied to change justification and reprogramming actions in order to eliminate extended delays of Federal review and approval action. Initial delays at USOE in the project approval (grant) and later approval action for funding and reprogramming action had direct effect upon project time lines and successful completion of objectives and grant requirements.

It is recommended that the program evaluation within the center be fully considered and procedurally established as one of the first semesters orders of business by the Principal/Director and staff. We would further recommend that an "outside" third party evaluator be brought into use in order to assess the continuing development of the Center.

The continuing review of resource sharing and interaction of program clusters is an internal evaluation requirement for the Principal/Director and his staff. It is recommended that as the curriculum extensions are developed that the concomitant sharing of resources and learning teaching experiences be enlarged upon. This will be particularly valuable as applied across the D. C. Schools master planning system.

We would recommend that within the curriculum program clusters that each model developed assure the establishment of stated learning or behavioral objectives; however, more importantly, there should be a clear statement of measurable criteria and the criteria reference testing (CRT) procedures. CRT will be all important in evaluating the product of student learning and job placement.

The common goals and performance objectives of curriculum modules in development were hurried over and we feel not adequately developed for the

career clusters. Therefore, it is recommended that in conjunction with development of the CRT program above, that a staff task force be appointed for the Center to review and establish validation of the common goals and performance objectives. Refinement and development of a "tighter" and more meaningful goals and objectives statement will undoubtedly result. The CRT's will measure and place needed change and program success.

We recommend that the Principal/Director and staff also concentrate on the learning program which develops maximum "hands on" experience in the production of things. Further, this productivity must serve the needs of the school system and community in order to be truely a successful program, stimulating to the learner -- useful to the system and community.

The development of a Center Curriculum Guide and its distribution, both system and community wide, is highly recommended. Such a guide is necessary for guidance services and for student information programs, as well as, the general public information program yet to be developed for the center.

A curriculum review committee should be established to perform required review and certification of career education electives and overall requirements for graduation within the D. C. Schools System. The Principal/Director and staff should pursue availability of maximum credit for students pursuing the career education program electives.

Space availability will dictate the operation of a "store" sales outlet for items produced within the student training programs. We recommend that this idea of a store be continued with every effort made to ensure such an outlet for student product sales.

The Center counselling program must be developed and implemented within this first semester of operation; in part, has already been planned, but requires correlation with the overall counselling program for Career Development, D. C. Schools.

SECTION III--SUMMARY

A. Findings

The findings summarized herein are presented in two parts: those related to the evaluative conclusions (Section IIA, part 5); and those related to the audit conclusions (Section IIB, part 5).

1. Evaluative Findings

a. that the building site, the former National Geographic Building, has been renovated and designated the Lemuel A. Penn Center.

b. that the overall approach to, and planning for this project was too grand and extensive in expectation of the very limited time table. As initially conceived the six week conference meeting would have been too short to accomplish the many objectives. Certainly the three workshops as actually presented, fell short of the necessary curriculum development and staff maturation.

c. that due to extensive program delays, contracting and work delays on building renovation, the implementation of the career education program within the Lemuel A. Penn Center was delayed until school year 1974-75.

d. that the "intensive period of training and curriculum planning" was modified for one two-week period, summer of 1973, followed by one week in February 1974. Training and planning thus offered over an extended period of time reduced continuity and since it was conducted during the school year, some designated teachers could not attend the workshops.

e. that the concept and curriculum in development was a modification of career education as is commonly defined in education circles. This career

center is to provide students with a choice of vocational-technical training courses within their "strong interest and job aspirations." The thrust of career education within the D.C. Career master plan is to provide "entry level" job skills.

f. that the instruments of communication of the status of project development: space allocations; program and curriculum offerings proposed; review of relevant materials and review of proposed plans for renovation was slow to arrive at the teacher level -- and communication had been delayed until the Phase I workshop in August 1973. There was immediate delay and much frustration while the instructors reviewed relevant materials and discussed proposed programs with knowledgeable personnel in the various fields. Additionally, these affected instructors needed to tour the Center (building) and review the proposed plans for renovation. Extensive review of proposed programs, needs, type and quality of instruction-education required for "entry-level" jobs and outside sources of information were required to be carried on outside of the workshops. Advance preparation and coordination had not been properly accomplished.

g. that the teacher/trainees review of building renovation and proposed plans for internal space assignments for the various instructional programs, in addition to their recommendations for change and reallocation of space, cost stated program objectives time of approximately one week, this additionally shortened the training and curriculum development time. Much valuable time was lost to this renovation survey by teacher/trainees and staff.

h. that the Philosophy and Goals Statement and course descriptions presented in the RCA Final Report (Summer Workshop) were not made available

to the teacher/trainees until the Phase II workshops, Spring 1974.

i. that the Phase I Conference (workshop) was not conducted and accepted by the trainees as stated in reports, but somewhere in a middle activity position of quality and completion of objectives. Certainly the loss of at least 50% of the staff training and curriculum development time to facilities survey and space allocation change recommendation, did little to further curriculum development. It did have some effect in preparation of staff cohesiveness and team work.

j. that the major listed product objectives of the Curriculum and Staff Development were accomplished in part or in their entirety by the RCA Service Company staff with the exception of the establishment of advisory committees for each cluster program area.

k. that the developed and approved program clusters and program outlines focused primarily on the fine arts as opposed to the humanities. Music was not completed and program development status was such that space limitation might cause an expanded music program to be dropped from the curriculum.

l. that the delays and changes to meet the needs of the project as encountered during the summer conference (workshop), dictated further change and contract modification for the RCA Service Company. The RCA staff and Project Director added new objectives and required assistance to the Statement of Work. This action further condensed the curriculum and staff development training time into specific items to be covered within the remaining two one-week workshops available. Review of relevant curricula and related materials collected by the school personnel have to be incorporated as an on-going activity during the workshop periods.

m. that the Phase II workshops conducted by the RCA staff functioned more smoothly than that of Phase I. Daily schedules were prepared and discussed with the teacher trainees and a broad based programming technique provided for flexibility and yet a structure for logical progression of the training.

n. that the curriculum and staff development training conducted was satisfactory. Attendance was somewhat below stated objectives and assigned space and facilities were considered poor. Seating arrangements and trainee attention was not as high as might be expected due to these poor conditions.

o. that the workshops presented a deeper insight into curriculum development and the whole problem of competency-based instruction that that which trainees had been previously exposed to. Acceptance and "use-rate" will vary greatly within this small group of trainees even though the prepared materials and procedures will provide a standardization of format and procedure if accepted.

p. that the assignment of a full time Principal/Director made definite managerial advances as well as having a settling effect on the conduct of the workshops and staff development.

q. that the period of trainees workshop activities and RCA Consultants advisory activities was somewhat short to be truly effective, particularly for those trainees with only technical background and teaching experience.

r. that the designated program teachers were concerned with the procedure of returning to their regular classrooms and instructional duties, while expected to provide services to the curriculum committee for the Center. They were concerned about additional workload on nights and weekends, or the possibility of spending a summer of program work without stipend.

s. that the project teachers and teacher control group responses to mailed out questionnaires from the Auditor/Evaluator were very disappointing. Not only delayed in response time; but, providing a very small sample of respondents. Discussion of findings based upon the questionnaire are found in number 5 on page 46 of this report.

2. Audit Findings

a. that the project, the planning and evaluative capabilities for the implementation of a high school level career development program is one year behind the proposed and planned project implementation date. Major delays were attributed to securing government funding and reprogramming of funds; delay in securing consultant assistance and contracting; and the late bidding, contracting and work delays in the renovation of the Center facilities.

b. that the project success was somewhat delayed by the fact that a full time Principal/Director was not initially available to "lead" the personnel and staff or the cross-staff coordination of project activities.

c. that the project management actions were not completely planned nor was there a complete project master plan developed. The "model" of administrative actions and interrealted approvals, D.C. School Staff, to D.C. Government, to Federal Agency Office, and return, which were involved in this project, was sufficient to delay the project. The heavily layered supervision and "control" approvals during this first year continued this delaying affect.

d. that the planning and monies made available to the project were insufficient to ensure meeting the needs of the D.C. School personnel involved in the project, as well as, the stated staff development or curriculum development necessary.

e. that the RCA Community Relations Specialist failed completely to follow up and establish the very important Community Advisory Committee and to identify community resources.

f. that the structured procedures for development of curriculum modules and the assistance in modular program development and technical writing is the most valuable RCA staff contribution.

g. that the Center staff was behind schedule as of May 15, 1974 with the curriculum development tasks as only approximately eight percent of the approved programs were found to be in some modular form, identification or writing.

h. that the model for the program evaluation within the center is adequate for present planning requirements and will be further developed with practice and operational experience. Objective task measurement of the learning process was assured within the curriculum module format.

i. that a limited survey of agencies and institutions was accomplished by the teacher-trainees in order to determine the "kinds of job opportunities available" and also the review and determination of the type and quality of "training required for entry level jobs."

j. that the "structure for interaction of the program elements (while sharing resources and facilities) must develop piecemeal with the curriculum modules and the program element implementation.

k. that the initial concept of use of curriculum outlines was replaced by the use of "cluster programs" as an outline of content proposed for each program. Cluster programs were there analyzed and stated in terms of desired student competencies and then, in behavioral or performance objectives. The

learning system and teacher may then be held accountable for teaching the competencies and exposure to student behavioral patterns desired and necessary to meet performance objectives of the technical skill or career entry level job.

l. that the time planned and reprogrammed for the Phase II workshops was insufficient to fully cover common goals and performance objectives which were to be developed for the curriculum training effort had to be directed toward technical writing training and the understanding of standards being stipulated.

m. that the development of a meaningful program of production activities to enhance the instructional programs, became a part of the development of each program outline. They are to be further developed by each teacher and will require further evaluation based upon curriculum modules, actual teaching plans and operational training and classroom activities.

n. that student evaluation and evaluative criteria is to be developed as a part of each learning module. Emphasis was not placed on appropriate instruments available from other institutions and industry or business training programs. The review of possible proper use of such instruments in this program was also omitted. Special tests and other evaluative devices were not devised as had been planned.

o. that the plan for outside evaluations to be periodically conducted within the center was not devised. Only an internal formative evaluation model was designed and planned for implementation.

p. that the means and procedure for continuous planning for the Center has yet to be fully developed. The Principal/Director is planning upon being responsive to central planning procedures and requirements of the D.C. School Board Staff.

q. that Center program promotion and public relations were not receiving desired or required emphasis within the community and particularly the prospective student career education participants.

r. that the review of unit requirements for graduation was yet to be accomplished, based upon developed curriculum and evaluation. Maximum credit for center studies must be strongly pursued by the Principal/Director and staff.

s. that the establishment of a "store" sales outlet for student generated products is a nice-to-have goal which may have to be abandoned for lack of space availability and operational cost.

t. that the Principal/Director and D.C. School Board Staff are continually developing and/or modifying the schedule and time-table for accomplishing the stated goals and objectives of the Center. Good planning and management practice should provide needed stability in this area.

u. that the required planning to organize a counseling service for the Center had not been fully accomplished. When developed, it must yet be correlated with the overall counseling program for career development.

v. that the Center staff requirements and personnel actions were reviewed by the Principal/Director. That teacher qualifications and staff development needs were initially responded to in the Phase II workshop; and, that an in-service program is planned. Staff recruitment procedures have been developed for the Center.

w. that the development of advisory committees for the program clusters remains to be accomplished by the Center staff.

B. Commendations

The commendations herein summarized are presented in two parts: those related to the evaluative conclusions (See number 5 on page 46); and those related to the audit conclusions (See number 5 on page 82).

1 Evaluative Commendations

a. the Acting Project Director is commended for his persistance, even though he was only able to provide a "part time" effort early in the project to insure initial project completion and a smooth implementation of the Lemuel A. Penn Center.

b. the RCA Service Company's Educational Division Staff is commended for meeting a most difficult training situation "head-on" and retaining their composure and flexibility. They were quite successful in meeting all established objectives with only one exception.

c. the D.C. School Board and Staff are commended for establishing this Career Education Center, and others in the stated master plan, to provide students an expanded shopping list of vocational and technical training programs.

d. the teacher/trainees selected for the Center staff are commended for maintaining their composure and dedication to the project and the school system even in the face of the many delays and program changes.

e. the RCA Educational Services Division was well equipped with excellent training materials and workshop hand-outs. It is highly commendable that the RCA staff was able to draw upon such a large reservoir of materials, subject based upon previous or currently on-going contracts similar in nature. These materials and the staff presentation proved to be most helpful in fulfilling the curriculum development process for the Center.

2. Audit Commendations

a. the Educational Division Staff, RCA Sercice Company is commended for pulling together a rather vague training plan and for organizing a very cohesive teacher/trainee group. Initially going their individual ways, the teacher-trainees were taught the need for staff team-work, were presented with ideas and recommendations for standards, formats and procedures and through their joint effort, produced the desired intial learning module products.

b. the Principal/Director is commended for his outstanding job of pulling the Center project together after his late assignment and for providing the necessary leadership to the Center staff. We expect a successful growth and development pattern of the Lemuel A. Penn Center will reflect this educational leaders strengths.

C. Recommendations

The recommendations herein summarized are presented in two parts: those related to the evaluative conclusions (See number 5 on page 46); and, those related to the audit conclusions (See number 5 on page 82).

1. Evaluative Recommendations

a. the overall program plan and stated project objectives were too extensive to be accomplished in the time period initially programmed. We recommend that a complete reprogramming and project plan be developed before an attempt at replication be made. A three Phase, in-house curriculum and staff development program should be considered. A meticulous development of the career education center should allow for a two year construction and/or renovation plan for required facility availability.

b. that all selected teacher/trainees be trained in the workshops and

not by second and third hand information "passed on" by one who is attending the sessions. We recommend program of adequate funds and substitute teachers to insure that the select teachers attendance availability. Also in this respect, early planning of training workshops in order that sufficient lead-time notice can be given the teachers in order to insure availability for the summer sessions.

c. that the D.C. School staff give due consideration to the augmentation of the Master Plan of Career Centers and Vocational Training to include a Career Education Element within all elementary grades K-8 and secondary grades 9-10. These Career Education elements of instruction would provide the students with knowledge of the various types of careers available in the District and job skills required.

d. that the Organization of Advisory Committees and Community Assistance to the Career Education programs be made a very high priority action of pre-planning the Phase I of project replication.

e. that coordination of change input to the facility renovation/construction be accomplished with the D.C. Schools architect outside the formal workshop or in-service teacher training programs.

f. that D.C. Schools and/or Center Philosophy and Goals statements, when published, be provided to each staff and teacher incumbent. That all teachers and staff members have, understand and apply their educational efforts to fully utilize these published goals and guidelines.

g. that the selected career cluster programs be fully augumented with completed learning modules and teacher plans as soon as possible under present conditions and that a decision be made regarding those clusters in the arts and particularly the humanities which are to be retained for Lemuel A. Penn curriculum or to be offered elsewhere, if at all.

h. that future conferences and workshops be conducted in a training facility and atmosphere more suitable and proper for adult teacher/trainees. That classroom teaching aids and instructional hardware be made available to the contractor for his use.

i. that future planned curriculum and staff development workshops increase training time and work sessions devoted to standard formats; development of the performance objectives; teaching and learning conditions; student evaluation with great emphasis on "measurable" objectives of performance and more one to one advisory and corrective guidance/assistance.

j. that published standards, a policy and procedures manual and standard format for learning modules and teaching plans be established for the Center. Provided early enough in a replication situation they will circumvent much of the research and development time, effort and expense spent on this project.

2. Audit Recommendations

a. that any replication of this planning and evaluation procedure not be attempted. In lieu thereof, we recommend a phasing concept of from one to two years in program development, with implementation in the third year. We recommend a more meticulous and thorough project development. The primary goal should be to develop a program which will provide the students with prerequisite skills and knowledges for post secondary technical education or entry level career jobs, based upon known local student needs. (See number 7 on page 92).

b. that there is need to review present Center program development and the program clusters which are to be developed in the humanities program. There were no specifics available for consideration or evaluation that the

decision be made to either drop music clusters from the arts program or that curriculum development be pursued immediately and space for required instruction program be made available.

c. that master plan review by D.C. Schools Staff eliminate via priority assignment of program clusters, the possible duplication of Center program curriculum offerings except where student needs dictate multiple efforts.

d. that other student needs be supervised within the major program areas of Business, Social Services, Engineering and Industrial and Health fields. It is felt that concentration of these skill areas would more readily provide post secondary student employment and satisfy community needs more appropriately than the arts and humanities clusters being developed.

e. that a more thorough evaluation of the District Architects Planning and Business Offices contract procedure be accomplished prior to planned educational program implementation. Some assurance of facility availability must be obtained for final timeline planning.

f. that the Lemuel A. Penn Principal/Director and staff move immediately to follow up and establish the required Community Advisory Committees for the various career clusters.

g. that submission of proposals, letters of intent and required attachments to the Office of Education (Department of HEW) be carefully prepared and then reviewed by a third party prior to submission. Careful attention by the Project Director should ensure the same type of action for change justification and reprogramming actions. That every attempt be made to ensure completed action under the Federal Guidelines for such projects in order to eliminate extended coordination or delays.

h. that, as new extension of the career program clusters are developed and added, the resource sharing and interaction experiences be enlarged upon, evaluated and made available to the D.C. Schools staff.

i. that each cluster learning model developed assure the establishment of clearly stated learning or behavioral objectives; more importantly, the clear statement of measurable criteria and a criteria reference testing (CRT) procedure.

j. that a staff task force be developed to review and establish validation of the common goals and performance objectives for the Center.

k. that the Principal/Director and staff develop maximum student "hands-on" experience in the learning modules and teaching plans utilized.

l. that a Center curriculum guide be developed and given wide distribution throughout the school system and community.

m. that the concept of a "store" sales outlet for student produced items be continued and established provided space can be made available within the Center facility.

n. that the Center counselling program be developed on a priority action basis and implemented during the first semesters operation, school year 1974-75. That the program be fully correlated with the overall counselling program for the Career Development, D.C. Schools.